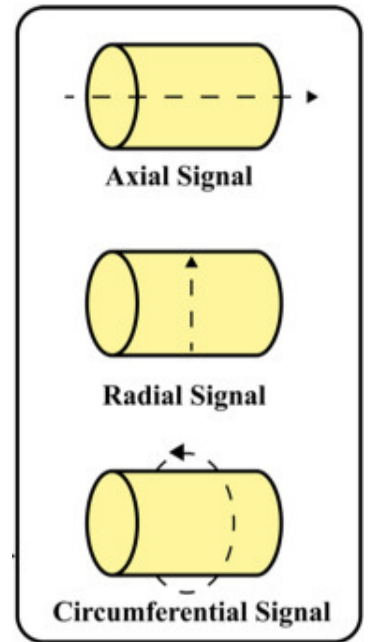


Understanding Tri-axial UHR vs Axial

The tri-axial sensor measures magnetic flux leakage signals in three directions—axial, radial, and circumferential—capturing the magnetic field leakage from the axial magnetization of the pipe, supplying more complete data into the sizing model. The addition of the radial and circumferential signal improves the tool's ability to identify and size large areas of general corrosion or widespread wall loss that may not be fully indicated by axial-only measurements.

Pipesurvey UHR technology further enhances detection performance through higher sampling rates and tighter circumferential sensor spacing, allowing the tool to resolve narrow axial features, deep isolated pits within larger corroded areas, and short/ deep pinhole-type defects that are often missed or under called using conventional axial MFL sensor configurations.



Key Benefits

- Captures axial, radial, and circumferential leakage components, providing a more complete magnetic signature.
- Better sensitivity to:
 - Axial and circumferential corrosion
 - Gouges and dents with metal loss
 - Complex or interacting defects
- Enhanced Feature Characterization
 - Better understanding of defect morphology
 - Supports advanced algorithms and ML-based classification
- Improve sizing accuracy and confident by accurately captures peak signal response.
 - Cross-validation between axes improves:
 - Depth and length estimation
 - Confidence in sizing irregular or clustered metal loss.

