

4.4.10. DEVELOPMENT OF MAGNETOSTRICTIVE SENSOR TECHNOLOGY FOR GUIDED WAVE EXAMINATIONS OF PIPING AND TUBING

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Examinations of piping and other components using guided waves have become increasingly attractive over the last decade due to high effectiveness of the technology in finding hidden anomalies. Different types of transducers together with the philosophy of a screening approach have been developed and tested using piezoelectric, and EMAT actuators.

Practical implementation of the technology has helped to recognize the most challenging applications when there is a need for better sensitivity, better inspection range, and better flaw characterization.

A review of magnetostrictive sensor technology will be given in reference to the new developmental work dedicated to the improvement of the performance of guided waves when applied to piping and tubing components.