

FERROMAGNETIC SHAPE MEMORY ALLOYS (FSMAS) FOR MAGNETO-MECHANICAL APPLICATIONS

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Ferromagnetic shape memory alloys (FSMAs), like NiMnGa were developed in the form of ribbons by rapid solidification route using melt spinning technique. The prepared melt spun ribbons annealed to enhance structural ordering were found to comprise of a combination of martensite and austenite phase. These materials as ribbons exhibited reversible change in the strain with the application of magnetic field and vice versa. Such properties are essential for applications in magnetically induced actuators like magnetically controlled diaphragms, micro-pumps and latches.
