

Electromagnetic Levitation at TU Graz

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Electromagnetic levitation provides an elegant method for noncontact containerless measurement of metallic melts. Currently such an apparatus is build up by the thermophysics and metalphysics group at TU Graz, Austria. An electromagnetic levitation device employs an inhomogeneous radio-frequency electromagnetic field to heat and position the samples. Induced eddy currents heat up the material into the liquid phase and exert a Lorentz force, pushing it towards regions of lower field strength. The sample is investigated by two high-speed cameras and a pyrometer to determine density and surface tension as a function of temperature.

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