



Removal of Magnets from Steel Panels

Theo Siegrist^{1,2}, Petru Andrei², Jeffrey Whalen¹, Eric Lochner³, Tim Murphy¹



1. National High Magnetic Field Lab; 2. FSU-FAMU College of Engineering; 3. FSU Department of Physics

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Other than walking up to a magnet and removing it by hand, there are very few available options to detach magnets from steel panels. Accomplishing this task requires an understanding of what is required from an applied magnetic field to detach the magnet, along with how to create that field. Current technologies such as ferrofluidics have the flexibility for a wide range of magnetic field modulations that can be explored for this application.

In searching for a technology solution to address the issue of unwanted magnets, it is noted that overcoming the magnetostatic forces between the magnet and the magnetic mild steel does not require the magnet to be saturated beyond its coercive field. An appropriately applied magnetic field (the disruptive field) with defined temporal and spatial properties in the vicinity of the attachment point will disrupt the magnetic interaction between the magnet and the mild steel, thus reducing the attractive force. Detachment due to the gravitation of the magnet can thus result from the application of the disruptive field.

