

Zero-force Sample Handling System for High Magnetic Field Environments

Disclosure Number

200902312

Technology Summary

This invention enables the insertion and handling of ferromagnetic samples in a high magnetic field with high magnetic field gradient region without any effective forces being on the specimens. Conventional approaches for sample delivery and handling in this type of extreme magnetic field environment experience extremely significant forces on the sample and require large handling systems to accommodate (counter) those loads. This invention embodies several claims that eliminate this force issue and enable ferromagnetic sample handling/insertion in the severe high magnetic field gradient/magnetic field environment with effectively zero-force on the sample making system design more efficient and safer.

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