MagneticMaterialSim Phase 2 Report

CSV Data Preview

fea_input.csv

	Name	CoreLoss	FluxDensity	MagField
0	SoftIron	1.0	1.0	50
1	HardAlloy	2.0	1.5	100

fea_results.csv

	Material	MeanCoreLoss
0	soft	1.0
1	hard	2.0

hard_mesh.csv

	x	y	Bz
0	x	y	Bz
1	x	y	NaN
2	0.0	0.0	NaN
3	0.1	0.0	NaN
4	0.2	0.0	NaN

hard_summary.csv

	material_count	mean_core_loss	mean_flux_density	mean_mag_field
0	1	2.0	1.5	100.0

soft_mesh.csv

	x	y	Bz
0	x	y	Bz
1	x	y	NaN
2	0.0	0.0	NaN
3	0.1	0.0	NaN
4	0.2	0.0	NaN

soft_summary.csv

	material_count	mean_core_loss	mean_flux_density	mean_mag_field
0	1	1.0	1.0	50.0

JSON Summaries

fea_comparison.json

```json
{
  "soft": {
    "material_core_loss": 1.0,
    "fea_core_loss": 1.2
  },
  "hard": {
    "material_core_loss": 2.75,
    "fea_core_loss": 0.8
  }
}
```

Material Reports

Plots

fea_comparison.png