**UNSATURATED BONDED NEO MAGNET: CAUSES AND EFFECTS**

Magnets from different magnetic material require different magnetizing energy.

- Bonded neo magnets need higher energy for magnetization as compared to ferrite and sintered neo magnets.
- Applying lower than required magnetizing field will result in an unsaturated bonded neo magnet.

**Saturation field for typical ferrite**

**Saturation field for typical sintered neo**

**Saturation field for typical bonded neo**

**Verification of magnet saturation**

- A saturation curve should always be generated for any new fixture design or modification to magnet or magnet material.
- To generate a saturation curve, magnet performance (magnet flux or mid-airgap flux density for closed magnetic circuit) is charted incrementally as magnetizing energy is increased.
- When an increase in magnetizing energy does not result in significant change (typically less than 2%) in magnet performance, the magnet is saturated.

The magnetizing energy required to saturate a bonded neo magnet varies with magnet dimensions, density, material and desired magnetization pattern.