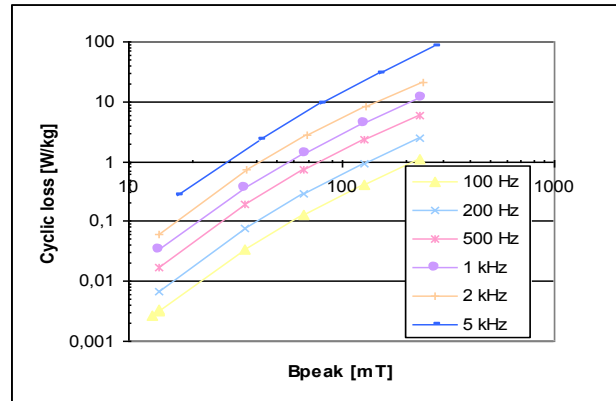


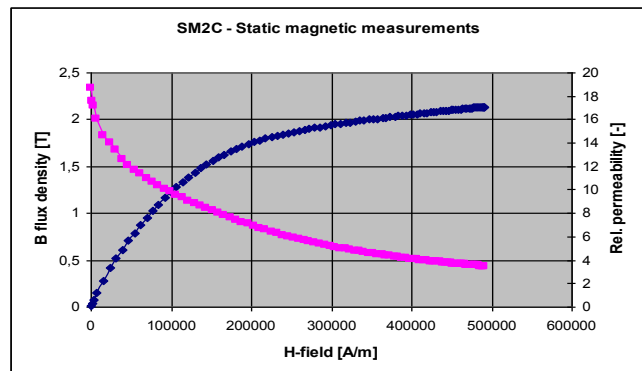
## Measurement

To measure the magnetic properties properly, some special techniques must be used. [American Society for testing and Materials, STP 371 S1]

- For measurements of permeability and saturation, especially in strong magnetic fields, an electromagnet and a Hall sensor is used. The results are seen in the figure below.



- For static and dynamic losses, coercivity and remanence, double-wrapped donut-shaped rings are used. See results in the figure below.



Permeability and thermal conductivity increases with increasing density of the metal, but the dynamic and dielectric losses are also increased. The dynamic losses are a combination of static hysteresis losses, eddy current losses and irregular losses. Particle to particle insulation decreases as a result of increased density. This allows the resistivity to decrease, leading to higher long-term eddy current losses.

Nevertheless, there are no eddy current losses for frequencies below 100 kHz for the MagChoke™.