FACTORS AFFECTING MAGNET AGING

Permeance coefficient (PC) value of magnet

- Magnets with higher PC values have either same diameter with longer length or same length with smaller diameter.
- Magnets with higher PC values have better self demagnetization characteristics and hence lower aging loss.

Density of magnet

- To achieve higher density, magnets are pressed with higher tonnage. This causes additional powder fracturing which creates fresh surfaces.
- Exposed fresh surfaces lead to higher aging loss.

Saturation of magnet

- Insufficient saturation of the magnet results in
  - Reduced squareness of hysteresis loop
  - Lower $H_{ci}$
- Reduced squareness and lower $H_{ci}$ leads to higher aging loss.