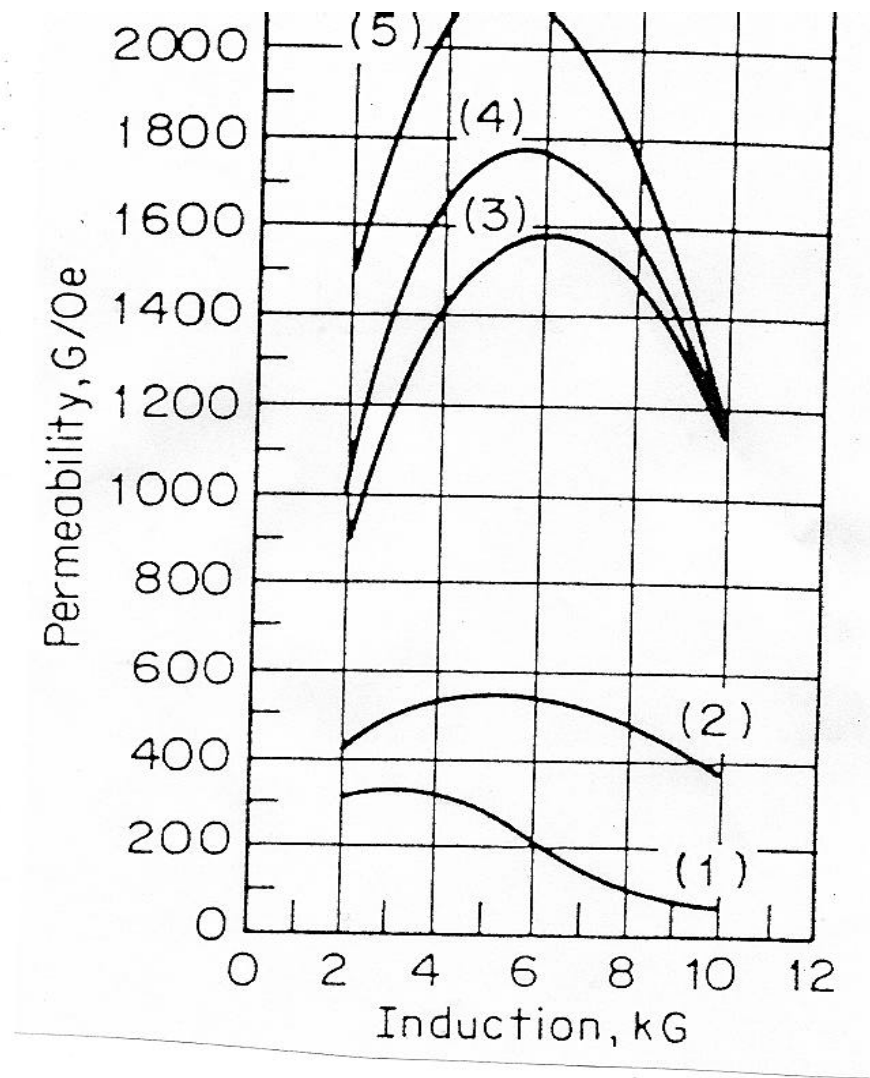


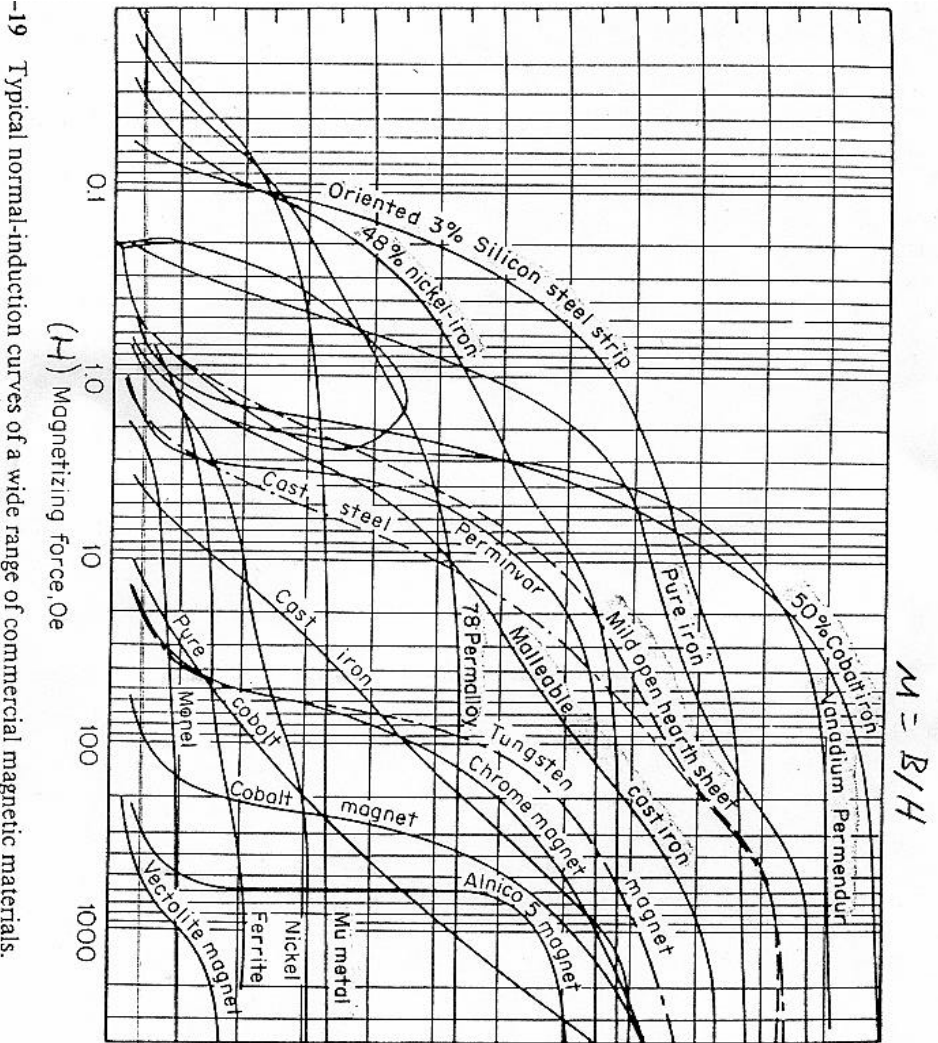
For curves, permeability (μ) = Induction (B) / Force (H).



Curves are:

- 1 - Cast Iron
- 2 - Ductile Cast Iron
- 3 - Annealed Iron
- 4 - Ductile Iron (3% Si)
- 5 - Malleable Cast Iron

For Malleable Cast Iron (Curve 5 slightly cut off) μ at 2KG is 1500 and μ at 5KG is 2100 (peak). Looking at the curve for Malleable Cast Iron below gives the same numbers. Notice μ increases with increasing Induction for the lower part of the "S" curve below. Above the "S" curve inflection point, the reverse is true. Since the magnetic component of our EM wave is very small, we are far to the left of the above curve 5 peak. Adding an external (or internal) magnetic field of $\sim 5\text{KG}$ will give maximum permeability and minimum current for zero mass. Above 5KG will be detrimental since permeability will decrease.



Below is B-H curves for Iron. Y-axis is Induction (B) in Kgauss. Saturation occurs above the "knee" of the curve plateau.

