

Properties	Nanocrystalline core	Permalloy	Co-based amorphous
Saturate induction(T)	1.25	0.7	0.6
Maximum permeability(Gs/Oe)	1800000	100000	1300000
Coercivity Hc(Oe)	0.005	0.05	0.01
Core loss (20kHz,0.5T)(w/kg)	<35		<30
Curie temperature (°C)	570	320	<200
Resistivity(μΩ,cm)	80	56	130

(2).Typical characteristic curves

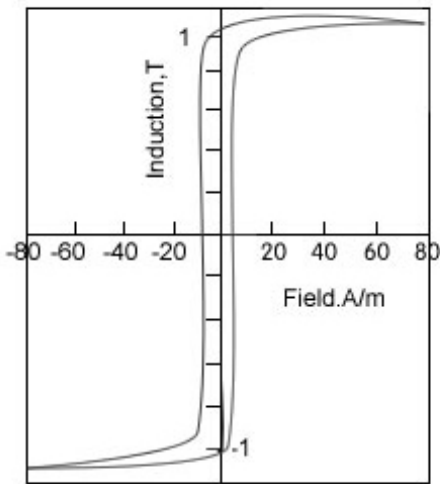


Fig1.Hysteresis loop

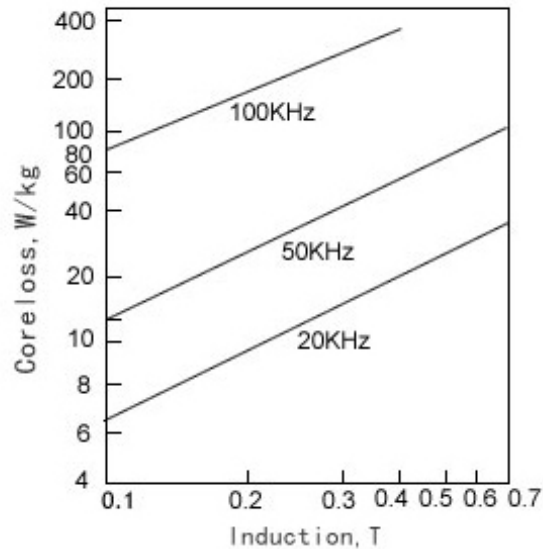
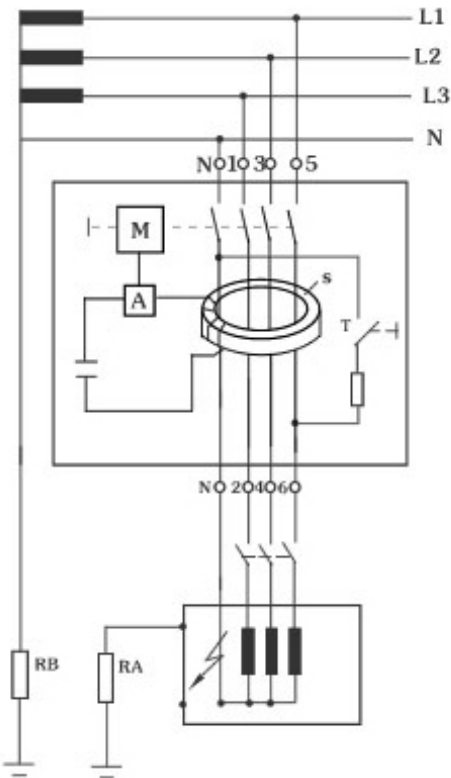


Fig2.Core loss after longitudinal-field-annealing

(3)Nanocrystalline cores used in summation current transformers for voltage independent RCCBs.

①Principles of operation.Fig.1 illustrates the functions of a voltage independent RCCBs.



- A:Release
- S: Summation current transformer
- M: Mechanism
- T: Test device
- RA:Earthing resistance (load)
- RB:Earthing resistance (system earth)