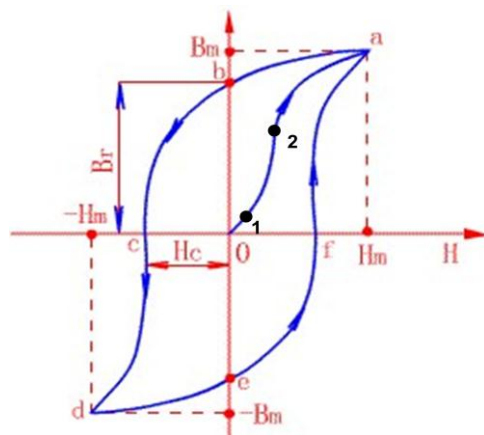


Hysteresis Loop test

Introduction

Hysteresis and Hysteresis Loop

The magnetic flux density (B) reduced with magnetic field strength (H) after reaching saturation of ferromagnetic, but it reduced along ab curve rather than initial magnetization (0a curve). Dielectric still retain a certain magnetic flux density called residual magnetic flux density when $H=0$. Continue to change



the magnetic field strength after reaching point B in the following order: $0 \rightarrow -H_c$, $-H_c \rightarrow -H_m$, $-H_m \rightarrow -H_0$, $0 \rightarrow +H_c$, $+H_c \rightarrow +H_s$; The corresponding magnetic flux density (B) respectively along the following curve and formed a closed curve: $b \rightarrow c$, $c \rightarrow d$, $d \rightarrow e$, $e \rightarrow f$, $f \rightarrow a$. The envelope curve ($a \rightarrow b \rightarrow c \rightarrow d \rightarrow e \rightarrow f \rightarrow a$) is the hysteresis loop. As we can see from the above process, the change of B is always behind the H, namely hysteresis. It is an important characteristics of ferromagnetic material. It is an important means to research magnetic properties by measuring hysteresis loop.

Test System

We introduced an AC characteristics tester-SY 8218 to test hysteresis loop.

Device Name	Frequency Range	Variable Temperature Test	Source /Power
B-H analyzer	10 Hz to 10 MHz(sin)	-30~150°C	± 5.2 A MAX, ± 140 V MAX