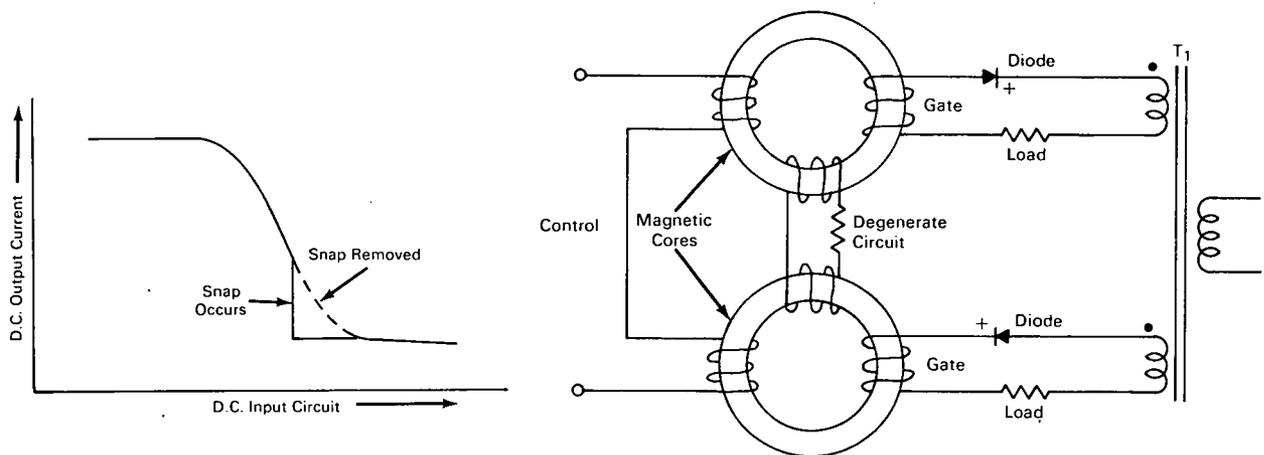


NASA TECH BRIEF



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Method for Reducing Snap in Magnetic Amplifiers



Snap is a phenomenon which frequently occurs in magnetic amplifiers and shows up as an abrupt change or discontinuity in the amplifier characteristics, as shown in the left figure. This discontinuity limits the range and hence the usefulness of the magnetic amplifier.

A method of reducing snap in magnetic amplifiers was developed which uses a degenerative feedback circuit consisting of a resistor and a separate winding on the magnetic cores. Briefly, the flux set up by the induced current in the degenerative feedback circuit is in such a direction as to oppose the change in flux which occurs during snap. The right figure illustrates the degenerative feedback circuit. This feedback circuit allows the magnetic amplifier to be used at lower values of output current, thus extending its range.

Note:

Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Lewis Research Center
21000 Brookpark Road
Cleveland, Ohio 44135
Reference: B68-10388

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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Category 01