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THE WEEKLY SUMMARY OF CURRENT SCIENCE



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SQUARE LOOP FERRITES NOW IN ODDBALL SHAPES

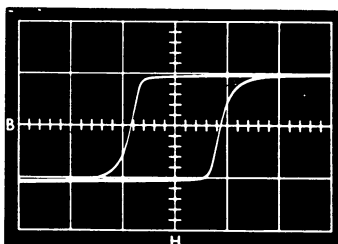
Ceramic ferrites are versatile magnetic oxides usually made by the press forming of powdered ingredients. Here at the Laboratories, a recent spill-over from our fundamental research in ferrites has resulted in a new fabrication technique. It makes ferrites of virtually any type or shape practicable: permanent magnetic ferrites, high frequency core materials, computer elements with square hysteresis loops.

The new "cookie cutter" process begins with ferrite powder mixed with a plastic binder on a rubber mill. This forms a flexible sheet of almost any thickness down to 0.005 inch. From it, ferrites of any desired shape can be cut or molded—easily and economically—before the special presintering and sintering treatments. The fired ferrites shrink evenly and are exceptionally uniform in material density and magnetic characteristics.

Our electronics engineers have found the new fabrication technique particularly valuable for making multiaperture devices—wafer-thin square loop ferrites used in computer memory cores and switching circuits. Practical development of these and other applications is continuing as a team effort of the Laboratories and GM divisions.

Involving a blend of scientific understanding and engineering know-how, this new process is another example of the advances in technology being made by GM's research in depth.

General Motors Research Laboratories
Warren, Michigan



Hysteresis loop from ferrite memory core prepared by new GMR process.

