

[54] APPARATUS FOR MANUFACTURING  
MAGNET WIRE

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264/174, 134; 427/117-120; 118/405

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[57] ABSTRACT

A novel apparatus for manufacturing magnet wire in a continuous process by which coatings of a flowable resin material may be applied concentrically to a moving elongated filament in thickness of about 16 mils or less. The filament can be a bare copper or aluminum conductor having round or rectangular configuration or an insulated conductor upon which a top or an intermediate coat of material is desirably applied. Coatings of one-half mil and one mil also can be applied by the method of the invention. By the apparatus of the invention, magnet wire can be manufactured by continuously drawing the wire to size, annealing the wire, if necessary, insulating the wire with one or more coats of flowable resin material, curing the resin material, if necessary, hardening the resin material, and spooling the wire for shipment, without interruption at speeds limited only by the filament pay-off and take-up devices used. The apparatus of the invention utilizes the flowable resin material to center the filament in a die, the size of the die controls the thickness of the coat to be applied. In the apparatus of the invention, only the resin material being applied to the filament is in contact with the filament. Thus, the mechanical wear normally associated with centering dies used in extrusion processes and like devices is completely eliminated.

14 Claims, 4 Drawing Figures

