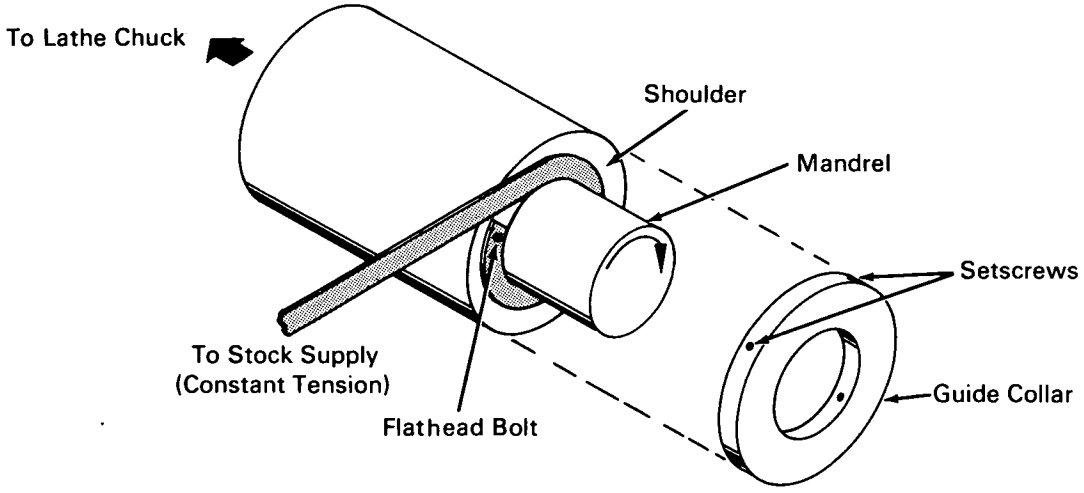
NASA TECH BRIEF

Collar Positions Strip Stock Used to Form Coil on Mandrel



The problem: To form a coil from strip sheet metal stock, with the wide surface of the stock parallel to the radius of the cylindrical mandrel on which the coil is formed.

The solution: A guide collar is fastened to the mandrel held in a lathe chuck, to maintain the strip stock in proper position during winding of each turn of the coil.

How it's done: One end of the stock is held to the shoulder of the mandrel by means of a countersunk flathead bolt. For the first winding, the collar is placed on the mandrel approximately one stock thickness away from the shoulder. The collar is held in place by four setscrews tightened against the mandrel. One turn of the coil is then formed by allowing the lathe to make one revolution. After each revolution of the mandrel, the collar is moved forward one stock thickness to allow the next turn of the coil to be formed. The stock is fed under constant tension during the entire operation.

Notes:

1. This procedure has been used successfully to form coils from aluminum shimstock 0.015-inch thick × 0.625-inch wide.
2. With proper modifications, this procedure could be used for volume production of heat-transfer coils or fins, which would be welded on pipes containing circulating fluids.
3. This brief replaces Brief 65-10130 issued May 1965. Inquiries concerning this innovation should be directed to:

   Technology Utilization Officer
   Lewis Research Center
   21000 Brookpark Road
   Cleveland, Ohio, 44135
   Reference: B65-10130 (June 1965)

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated.

Source: Casey J. Blaze
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Category No. 05