

Metal Spinning Manufacturing Process

1

Shearing

Sheet metal blank is cut into the required size.



2

Cycle shear

The sheared plate is cut into round shape.



3

NC automatic lathe

Spinning is automatically performed as programmed.



4

Metal Spinning

The multi-pass spinning cycle is performed by hand.



5

3-roller bender, automatic welding machine

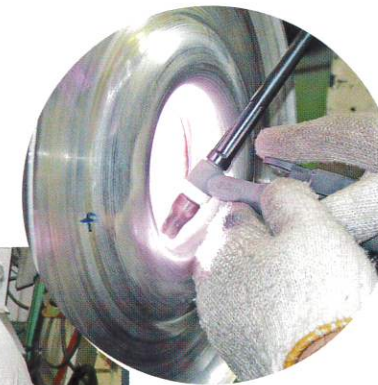
The rolled plate is welded longitudinally.



6

TIG welding by hand

The main body and pipe are joined.



7

Metal spinning

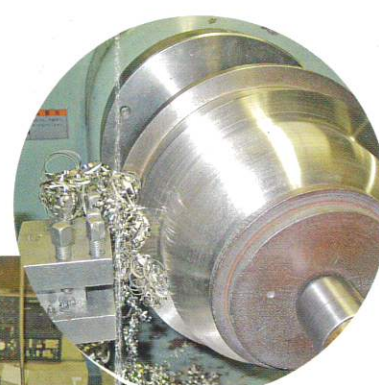
The flange is formed by hand spinning.



8

Lathe

Outer dimension is determined.



9

3-dimensional laser processing

Metal drilling

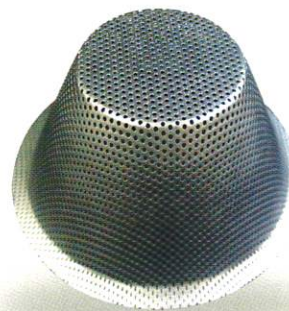


Finished product



Shield for a transformer
used in power plants

Product Information



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Metal Spinning



About the Metal Spinning

Metal spinning, also called plastic working, is a method used to form metal into a specified shape. As a metal disc and mandrel rotate together at a high speed, a spatula or roller presses the workpiece against the mandrel, causing the workpiece to pass over the mandrel and thus produce the specified shape. (This working method utilizes the ductility of metal.) The manner in which this work is performed is similar to that of using a potter's wheel set by turning on its side.

The defining characteristics of this metalworking process are the strain hardening of the metal that is being worked, and the ability to form metal to produce axially symmetric shapes.

Metal spinning is an artisan craft; in order to perform this special manufacturing process one must be highly skilled. Thus, the sophisticated human labor for this process cannot be replaced by machinery.

The metal spinning method has been around for thousands of years. In ancient times, this process was used to make metalware (serving dishes) and washbasins. Today it is generally used to create products such as parabolic antennae and reflectors. This method is also applied in modern high-tech manufacturing, such as making the tips of H-2 rockets, as well as parts for machines that create semiconductors.

