

WIRE DRAWING

The wire drawing process of producing the wires of different diameters is accomplished by pulling a wire through a hardened die usually made up carbide. However a smaller diameter wires are drawn through a die made of diamond. The larger diameter oriented wire is first cleaned, pickled, washed and then lubricated. Cleaning is essentially done to remove any scale and rust present on the surface, which may severely affect the die. It is normally done by acid pickling. The hot rolled steel is descaled, pickled in acid, washed in water and coated with lime and other lubricants. To make for an easier entrance of wire into the die, the end of the stock is made pointed to facilitate the entry. A pointed or reduced diameter at the end of wire duly lubricated is pushed or introduced through the die which is water cooled also. This pointing is done by means of rotary swaging or by simple hammering. It is then gripped and pulled for attaching it to a power driven reel. The wire diameter is reduced in die because of the ductility property of the material to the smaller diameter through one set of die. However for more reduction in diameter of the wire, various sets of dies can be used in line for subsequent reduction in diameter at each stage. The reduction in each pass through the die range about 10% for steel and 40% for ductile materials such as copper.

