

Electric resistance welded tubing

Manufacturing process

In ERW tubing, slit to width flat steel strip passes through a series of tooling rolls that progressively cold form it into a tubular shape. Using high frequency induction, heat is generated by the natural resistance of the steel to an electric current which is confined to the narrow strip edges in the weld vee. Once the proper temperature is reached, the two edges are forced together by pressure rolls to create the weld. Unlike MIG welding, no extraneous metal is added during the process, so the weld has the same composition as the body of the tube. The forging process expels material which removes impurities creating a small amount of outside and inside weld flash.

The inside weld flash is treated differently depending on customer requirements.

- When the ID is non-functional, or an inside fit is relatively unimportant, the specific application will determine the appropriate ID flash condition.
- When the ID is functional, the flash is controlled to within a specified height from the tube's inside surface. There are several degrees of flash control available.

Following the flash control process, the tube is cooled and sized to the specified round or shaped dimensions by a series of finishing rolls and is then cut to order length.