

Copper Rod Continuous Casting and Rolling Line



1. Prospect

Under the situation of scarce copper resources and increasing stringent environmental protection requirements, most countries recycle and reuse scrap copper to save copper resources and protect the global environment.

Most countries in the world are no longer adopt traditional boat-shaped copper ingots, but instead adopt continuous casting and rolling (CCR) production processes.

Scrap copper is melted into recycled copper ingots through slag removal and crushing. Copper ingots are then processed to produce various copper products which meet the requirements. The continuous casting and rolling process can directly produce bright and low-oxygen copper rods that meet the requirements of wire and cable. Compared with copper ingot recycling, the direct recovery and reuse of copper scrap not only reduces the processing steps and improves the recovery rate of copper scrap, but also reduces the production cost by about 5%.

The continuous casting and rolling production line provided by us can use scrap copper as raw material and packed it into copper ingots through a hydraulic baler, the copper ingots are refined into liquid copper by REDOX in a reverberatory furnace. The liquid copper is produced into copper ingot through the launder, pouring it in continuous casting machine. And then the copper slab is rolled and sheared, straightened and scraped, and roughened into a hot continuous rolling mill to be rolled into a bright and low-oxygen copper rod.

This technology cleverly combines the two processes of casting and rolling. Compared with the traditional process that casting copper slabs first and then heating them in a heating furnace and rolling, it has advantages of simplifying the process, improving the working conditions, increasing the metal yield, saving energy, improving the quality of continuous casting ingot, and facilitating the

realization of mechanization and automation.

In the 21st century, the wire and cable industry has developed rapidly around the world. In China, copper for the wire and cable industry is growing at an annual rate of about 10%. With the increase of the demand for wire and cable, the demand for raw materials for copper rods will increase.

Continuous casting and rolling, the main manufacturing method of copper rods, will surely be more widely used in the future. Recycling copper rods from scrap copper will also usher in the spring of industry development.

We makes technological innovation on the basis of fully absorbing and digesting advanced production technology of similar international equipment from United States, Germany, Italy, etc. Our equipment has characteristics of simple structure, convenient operation, high production efficiency, high yield, low failure rate, low energy consumption, excellent copper rod quality and so on.

2. Production Process

Scrap Copper → Melting and Refining in Reverberatory Furnace → Launder to Protect Molten Copper → Ladle → Casting Machine → Haul Device → Roller Shears → Straightener → Burr Shaver → Feeding Device → Rolling Mill → Cooling and Deoxidizing Device for Copper Rod → After Haul Device → Coiler to Lay Rod into Coil.

3. Technical Parameters

Raw Material	Cathode copper or 100% scrap copper
Furnace	Cathode copper: Shaft furnace+Holding furnace
	100% Scrap copper: Reverberatory furnace
Productivity(T/h)	5-16
Casting Bar(mm ²)	1400-2330
Coil's Weight(kg)	3000-5000

4. Finished Copper Rod

By adopting advanced refining technology, this line rolls the refined low-oxygen copper rods produced by the rolling machine continuously to produce $\Phi 8\text{mm}$ bright and low-oxygen copper rods. The copper rods can meet the requirements of Chinese GB / T3952 standard and relevant international standards.

The finished copper rod is as follows:



5. Professional Technical Team

We can provide our customers with the most professional and comprehensive technical support with rich experience and a professional technical team.

In addition to providing customers with a full set of detailed drawings, technical documents and other

information, we also provide a professional technical team to the customer site for installation and commissioning, and provide customers with face-to-face technical guidance. Scrap copper recycling, casting and rolling line requires not only a professional continuous casting and rolling production line, but also a mature production process. Because the difficulty and key point of scrap copper recycling, casting and rolling line lies in the production process. Only a complete and mature production process can produce the low-oxygen copper rods that meet the standard requirements with bright appearance and stable diameter. Our technical team can provide two to three years of on-site technical guidance in the customer's factory until our customers have mastered a professional level of copper rod continuous casting and rolling production process. Choosing our equipment means choosing a strong and professional technical team and first-class quality and perfect after-sale guarantee. Your choice is the beginning of our cooperation.

6. Our Markets

At present, the copper rod continuous casting and rolling line business activities have cooperated with more than 20 countries including the United States, Canada, South Africa, Iran, Vietnam, Thailand, Japan, Turkey, Russia, Ukraine, Indonesia, Pakistan, Brazil, Malaysia and other countries. Cooperating clients include MIM COPPER, BRASCOPPER, DALONG, etc.

Product link : <https://www.linttop.com/copper-rod-continuous-casting-and-rolling-line.html>