

# HOW COPPER MOVES THROUGH THE MODERN WORLD

There are so many ways to find, refine and use the metals that make today's world work. For example, copper has been essential to civilization for thousands of years, but we're still getting better at using it. Let's take a look at the modern "lifecycle" of copper to see how manufacturers are optimizing metal production today.

## DISCOVERING

It's a lot more than mining. A number of industries join forces to explore new mines, remove impurities, produce copper metal and deliver them for conversion to usable products.



Metso's In-the-Pit solutions reduce and replace conventional truck haulage, and will bring significant savings in operating costs, energy use and water.



Declining ore grades at existing mines pose multiple challenges to serve growing demand.



Global copper production starting to grow again, reaching 19.7 million metric tons in 2017.



Exploration & Development



Extraction



Material Transport



Metso's separation and dewatering solutions are significantly improving mineral recoveries and minimizing water consumption.



Metso's largest gyratory crushers, gravity induced mills and HRC's are solving critical challenges around throughput and energy efficiency.



Metso's integrated thermal processing systems lower fuel consumption and reduce carbon footprints for more efficient mining.



China accounts for half of the world's demand for copper.



Chile accounts for one fifth of global supplies.

## RECOVERING

Copper does not come out of the ground bright and shiny. There are various processes that ore must go through to recover the copper.



Refining



Beneficiation



Comminution

## RECYCLING

Believe it or not, nearly all of the copper ever mined is still in use today. It's almost infinitely recyclable. But that doesn't mean we aren't finding more ways to recycle it better.



Metso's shredders are able to recycle many different objects and can recycle copper back in a sustainable and economic way.



Recycled copper is worth up to 90% of the cost of the original copper.



Each year in the U.S., nearly as much copper is recovered from recycled material as is derived from newly mined ore.



Visit [www.metso.com/mining](http://www.metso.com/mining) to learn more about how we are changing the way the world accesses essential elements.

## End Products

Conversion

Recycling