

WHAT IS UP OCC WIRE?

The UP OCC process for refining copper was developed and patented by Professor Ohno of the Chiba Institute of Technology in Japan. The licensed to use this manufacturing process is incredibly popular for the production of wire and cable products for the audio/video industry. UP OCC stands for Ultra-Pure, Ohno Continuous Casting.

In conventional processing, hot molten copper is poured into a cooled mold for extrusion, resulting in multiple, fractionated crystal structure. While the copper may be "pure" in the sense of measuring gas impurities in the copper in comparison to standard copper refining techniques. Oxygen Free Copper (OFC) has undesirable effects that lead many to use more expensive materials such as silver for their conductive strands. As developed for A/V cable use, the OCC process utilizes a heated mold for casting and extruding, with cooling taking place in a separate process. The result is a larger crystal size and increased purity that approaches the 6N, 99.9998%! Looking at it another way, traditional copper has oxygen impurities of 200 to 500 parts per million (PPM), while traditional OFC copper reduces that to less than 10 PPM. With the OCC process, the figure is cut in half to less than 5 PPM of oxygen, and less than 0.25 PPM of hydrogen (compared to 0.5 PPM for OFC). With these results, the OCC process creates "ultra-pure" copper.

The benefits of UP-OCC are as following:

- A true unidirectional copper crystal that is as free from impurities as possible to prevent corrosion
- Flexibility and fatigue resistance without impairing conductive characteristics
- Low electrical resistance
- Rapid signal transmission
- Corrosive-resistant
- Non-crystal boundaries