**All-Copper Antimicrobial Coils Now Available with MicroGroove Tubes, says International Copper Association**

*The Combination of Copper Fins and MicroGroove Copper Tubes Means Better Corrosion Resistance, More Heat Transfer, and Longer Lasting Performance*

**New York, NY (20 May 2013)** — According to the International Copper Association (ICA), a leading coil maker is now building all-copper coils with MicroGroove tubes, which is an industry first.

Previously, all-copper coils were made using conventional copper tubes with diameters of 9.52 mm. All-copper coils have long been recognized for their improved corrosion resistance. For examples, they have been used in critical applications such as hospital intensive care units; and in air-conditioners on mass transportation systems, *i.e.*, subway cars and buses.

Recently, a leading coil manufacturer Super Radiator Coils began offering all-copper heat exchanger made with small diameter copper tubes as well copper fins; and so became one of the first companies to combine MicroGroove tubes with copper fins, according to Matt Holland, Vice President of Operations at the Richmond Division of Super Radiator Coils.

“The performance of the all-copper coil with MicroGroove tubes is outstanding,” says Holland. “Several customers are quite interested in applying these small diameter copper tube coils in tough applications. The all-copper coils with MicroGroove offer the advantages of compact size and high efficiency as well as antimicrobial properties.”

The coils were developed in a world-class wind tunnel which allows for the monitoring of refrigerant temperature and pressure and the control of refrigerant flow through the coil while the wind tunnel is operating.

**Antimicrobial Properties**

Extensive laboratory testing sponsored by the ICA in recent years has proven that copper metal as well as many copper alloys have remarkable antimicrobial properties. This antimicrobial phenomenon has implications not only for touch surfaces but also for HVAC components such as the heat exchangers that are used in air-conditioners and refrigeration systems as well as air handlers.

Results of research have received official endorsement via the US Environmental Protection Agency "Treated Article Exemption" registration for copper alloys in HVAC applications. Granted in September 2010, the registration allows copper HVAC components to make product protection claims in the US. These products can claim to suppress the growth of bacteria, mold and mildew that reduce system efficiency and cause product deterioration or foul odors.

More about antimicrobial copper can be found on an ICA website ([www.antimicrobialcopper.com](http://www.antimicrobialcopper.com)) dedicated to the topic.

**All-Copper Heat Exchangers**

The copper tubes and copper fins used in heat exchangers are nearly 100 percent copper, which means the antimicrobial properties are at their highest for all-copper coils. Pure copper is used rather than copper alloys such as brass because unalloyed copper conducts heat better, although the antimicrobial properties are still effective with copper content of 60 percent or higher.

Bacteria can thrive on materials such as aluminum or stainless steel, which have no measured antimicrobial properties. Evidently the bacteria can form layers on these materials and become a substrate for further growth of microorganisms. However, on copper surfaces, the growth of bacteria, mold and mildew is quickly suppressed as a result of the antimicrobial properties of copper, so the surface is cleaner and easier to maintain.

Along with judicious use of filters and regular maintenance, all-copper coils can be kept clean and consequently they will conduct heat and resist corrosion better compared to other types of coil materials. The musty smells and bad odors sometimes associated with air conditioning equipment can be avoided. Heat transfer efficiency is higher for a clean heat exchanger compared to one with fins and tubes that are contaminated and so energy savings is another benefit of an all-copper coil.

“Smaller-diameter, inner-grooved copper tubes combined with copper fins are an unbeatable combination,” says Nigel Cotton, MicroGroove Team Leader for the International Copper Association. “The smaller tubes allow for the use of less fin materials and the antimicrobial copper fins also contribute to higher performance. ICA applauds Super Radiator Coils for its work in developing the manufacturing techniques needed to bring these superior products to the marketplace.”

Visit www.microgroove.net for information and join our discussion on LinkedIn: [www.linkedin.com/groups/Microgroove-4498690](http://www.linkedin.com/groups/Microgroove-4498690).

**About ICA**

The International Copper Association, Ltd. (ICA) is the leading organization for promoting the use of copper worldwide. ICA’s mission is to promote the use of copper by communicating the unique attributes that make this sustainable element an essential contributor to the formation of life, to advances in science and technology, and to a higher standard of living worldwide. Visit [www.microgroove.net](http://www.microgroove.net) for more information about ICA.

**About Super Radiator Coils**

Founded in 1928, Super Radiator Coils (www.superradiatorcoils.com) has its headquarters offices and a manufacturing plant in Minneapolis, Minnesota. The company also has manufacturing operations in Richmond, Virginia, and two plants in Phoenix, Arizona, including its Custom Air Coolers Division. The company produces condenser, evaporator, steam and other coils for more than 20 industries, including HVAC equipment manufacturers; petrochemical producers; pharmaceuticals; pulp and paper companies; food processing, storage and display equipment.

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