**New Research Supports Simulations of Airside Heat Transfer around MicroGroove Tubes, Says Copper Alliance**

*Now designers can simulate and optimize the performance of MicroGroove heat exchangers*

**New York, New York (20 October 2016)** – According to the Copper Alliance, airside heat transfer around smaller diameter tubes now can be modeled with unprecedented accuracy.

Research supported by the International Copper Association (ICA) and conducted by Optimized Thermal Systems, Inc. (OTS) compares the performance of slit fins and louvre fins for smaller diameter (3 mm to 5 mm) copper tubes [1, 2].

Previously only the largest OEMs could afford to perform coil optimization through CFD modeling. Now, thanks to the Center for Environmental Energy Engineering (CEEE) at the University of Maryland and OTS, techniques for optimizing coil designs are available to users of CoilDesigner®, a highly customizable software tool that allows designers to simulate and optimize the performance of heat exchangers [3].

OTS works with coil designers around the globe to optimize heat exchanger geometry, including the use of smaller diameter tubes. CoilDesigner includes the latest heat transfer and pressure drop models published in the open literature and users also can plug-in proprietary models. OEM users can shorten product development costs and quickly bring products to market.

“Airflow around smaller diameter tubes faces less resistance than airflow around traditional tubes,” says Nigel Cotton, MicroGroove Team Leader for the International Copper Association. “Hence, such capability opens the door to new, more energy efficient, heat exchanger designs.”

REFERENCES

1. Shekhar Sarpotdar, Dennis Nasuta, Vikrant Aute, “CFD Based Comparison of Slit Fin and Louver Fin Performance for Small Diameter (3 mm to 5 mm) Heat Exchangers,” *16th International Refrigeration and Air Conditioning Conference at Purdue, July 11-14, 2016,* Paper 2362.
2. Shekhar Sarpotdar, Dennis Nasuta, Vikrant Aute, “CFD-Based Airside Heat Transfer and Pressure Drop Correlation Development for Small Diameter (3 mm to 5 mm) Louver Fin Heat Exchangers,” *16th International Refrigeration and Air Conditioning Conference at Purdue, July 11-14, 2016,* Paper 2363.
3. For information on CoilDesigner®, visit the CoilDesigner webpages of CEEE at www.ceee.umd.edu/consortia/isoc/coil-designer; and OTS at www.optimizedthermalsystems.com.

For more information, visit [www.microgroove.net](http://www.microgroove.net). Join the MicroGroove Group on LinkedIn to share your ideas about research directions and product development. [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.copperinfo.com](http://www.copperinfo.com) for more information about ICA.

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