**Researchers from Shanghai Jiao Tong University (SJTU) Investigate Performance of ACR Coils of Smaller Diameter Copper Tubes under Wet Conditions, Says ICA**

*Air Flow around 5-mm Copper Tubes with Louver Fins Is Focus of New Research Presented at the Sixth Asian Conference on Refrigeration and Air Conditioning (ACRA) in Xi’an*

**New York, NY (September 19, 2012)** — The International Copper Association today announced new research on smaller diameter copper tubes has been presented at the Sixth Asian Conference on Refrigeration and Air Conditioning in Xi’an, China, August 26-28, 2012. The research describes the heat transfer characteristics of a round-tube, plate fin coils with 5-mm copper tubes. The effects of fin pitch, fin size and inlet relative humidity were measured on eleven different coils. It was found that the effects were more obvious for coils with tube diameters of 5 mm compared to coils with tube diameters of 7 mm or larger.

Smaller diameter copper tubes are gradually replacing copper tubes of diameter 7 mm and larger because of the possibility to reduce usage of materials and the refrigerant volumes. The experiments were performed at the Institute of Refrigeration and Cryogenics at SJTU. Coauthors included WU Wei and DING Guoliang from SJTU as well as GAO Yifeng and SONG Ji from the ICA Shanghai office.

Fin efficiencies were calculated for partially wet fins as well as for fully wet fins. A correlation was developed to predict the air-side heat transfer of a fin-and-tube heat exchanger coil and the correlation agrees well with the experiments.

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**About the Asian Conference on Refrigeration and Air Conditioning**

The Asian Conference on Refrigeration and Air Conditioning (ACRA) is one of a series of meetings held in Asia during the past decade, including Kobe (2002), Beijing (2004). Gyongju (2006), Taipai (2009) and Tokyo (2010). This conference provides a forum for the exchange of the latest scientific information on R&D as well as on technologies developed for commercial enhancement of refrigeration and air conditioning. It brings together engineers, scientists and industries working in the field of heat and mass transfer, especially refrigeration science and technology. For more information, visit http://acra2012.car.org.cn

**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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