

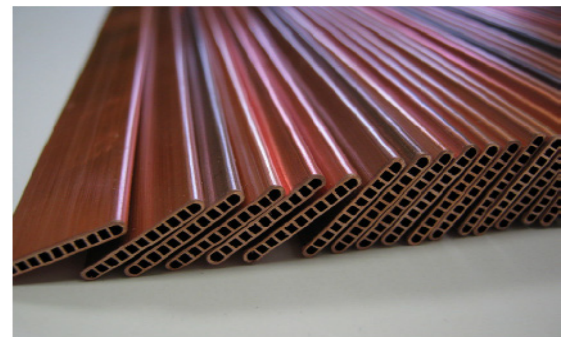
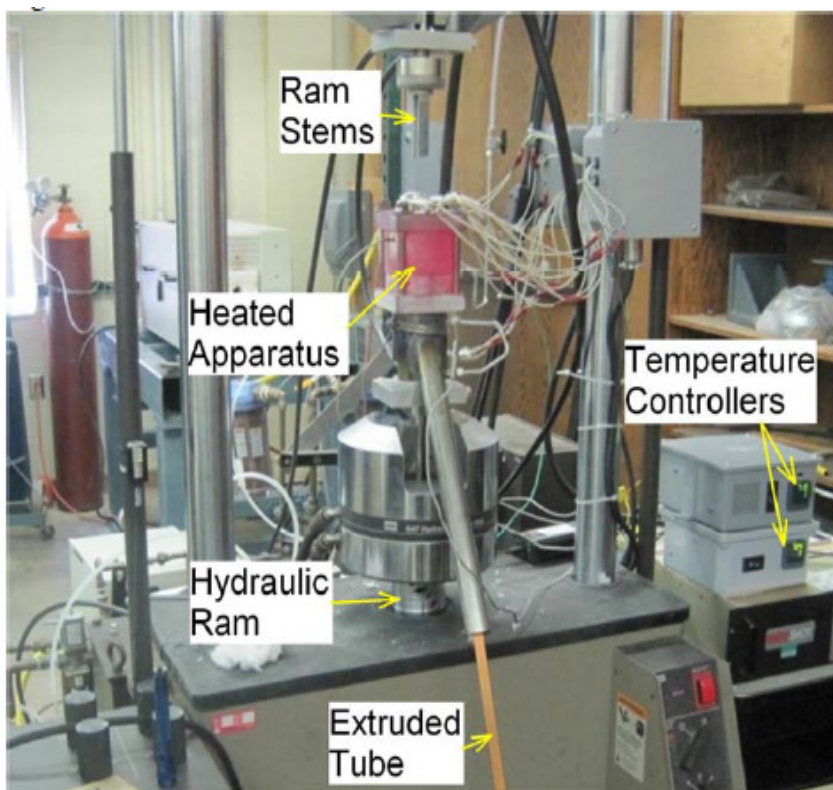
Copper Micro-Channel Tube for HVAC Applications

OU ID: #06032

Overview

Micro-channel heat exchangers are the latest trend in heating and cooling technologies providing up to 40% increase in efficiency. Most micro-channel heat exchangers on the market today are constructed out of aluminum. An inventor here at Ohio University has found a way to engineer these tubes out of copper.

This invention involves a method to produce a copper micro-channel tube, and effectively create a more long-term and durable heat exchange system for the commercial and residential HVAC industries. Formation of a copper micro-channel tube is an engineering challenge as compared to aluminum micro-channel tubes due to the increased temperatures required. Dr. Kraft has successfully developed an apparatus capable of producing the copper micro-channel exchangers.



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Commercial Application

- HVAC Market
- Biomedical/Industrial Refrigeration Market

Benefits

- Superior heat exchange
- Better long-term durability and resistance to corrosion
- Lower cost of maintenance when metal-work is required
- Copper is anti-microbial
- Ease of joining and repair

Inventor

Dr. Kraft received his Ph.D. in mechanical engineering from Rensselaer Polytechnic Institute (RPI) in 1994. He received an MSME from RPI, and BSME from Union College in Schenectady, NY. Dr. Kraft performs research in metal forming, mechanical and physical metallurgy, process simulation and development, mechanical testing, and mechanical behavior of materials. He has received over \$850,000 in research funding, and has 29 journal and conference papers, two handbook chapters and four US patents.



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