MT 26
International Conference
on Magnet Technology
Vancouver, Canada | 2019

Contribution ID: **657** Type: **Poster Presentation**

Wed-Af-Po3.14-04 [3]: High strength and conductivity CuAg micro-composites by accumulative drawing and bundling process

Wednesday 25 September 2019 14:00 (2 hours)

High strength and conductivity CuAg micro-composites were fabricated via casting and accumulative bundling and drawing (ADB) process. CuAg with large cross-section exhibits competitive strength and conductivity properties for pulsed magnets use. The CuAg filaments and eutectic whiskers evolution during the compositing process was investigated. The tensile properties and thermal compression properties were analyzed. And the conductivity characteristics varied with the wire size were also investigated. And the mechanism for the mechanical properties was discussed. It is found that the whiskers refining is crucial for the increase of the strength. And the pure copper matrix added by bundling process will be beneficial to the electronic transporting.

Authors: LIANG, Ming (Northwest Insititute for Non-ferrous Metal Research); Dr WANG, Pengfei (Northwest Institute for Non-ferrous Metal Research); Mrs XU, Xiaoyan (Northwest Institute for Non-ferrous Metal Research); Mr LI, Chengshan (Northwest Institute for Nonf-ferrous Metal Research); PENG, Tao (Wuhan National High Magnetic Field Center); Prof. ZHANG, Pingxiang (Northwest Institute for Non-ferrous Metal Research)

Presenter: LIANG, Ming (Northwest Insititute for Non-ferrous Metal Research)

Session Classification: Wed-Af-Po3.14 - Structural Materials for Magnets