

Ultra High Performance Connectors for Power Transmission Applications

Disclosure Number

201002515

Technology Summary

Connectors are key components of electrical power transmission systems. The widely used compression splice connectors were originally designed for low temperature applications, normally less than 70°C. However, the ever increasing electrical power demands results in a continuous increase in power transmission conductor temperatures, which leads to accelerated aging of the splice connector system and jeopardize the reliability/efficiency of power transmission. In this invention, novel connectors are designed for bare overhead power transmission conductors operated at high temperatures. The new design can significantly improve the mechanical integrity of the connector and increase the electrical conductance of the system as well. Thus, this new connector system can enhance the efficiency and the reliability of power transmission system.

Inventor

WANG, JY-AN

Materials Science and Technology Div

Licensing Contact

DETRANA, ALEXANDER G

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 139, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 576-9682

E-mail: DETRANAAG@ORNL.GOV

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