AmpedTES™ An Approach to Improve Heat Transfer in Thermal Energy Storage

CLAIM:
Improve the heat transfer in thermal energy storage systems without compromising heat storage capacity.

NOVELTIES:
• Utilizes an external, alternating electromagnetic field
• Induces significant artificial vibration/translation of the particles
• Rapidly increases the heat transfer in TES
• Added high conductivity metallic particles

ADVANTAGES:
• High energy density
• Simultaneous heat transfer enhancement
• Light weight
• Low cost

POTENTIAL APPLICATIONS:
• Power generation: solar, geothermal
• Waste heat recovery
• Thermal management of defense/military electronics
• Space based power generation systems
• Battery thermal management in automobiles
• Dairy industry (pasteurization)
• Greenhouses

INVENTOR(S) EXPERTISE
Dr. Sarada Kuravi, Assistant Professor
MAE Department, NMSU Research Area: Renewable Energy and Thermal Systems
http://retherms.nmsu.edu

Dr. Hector Gutierrez, Professor
MAE Department, Florida Institute of Technology
Research Area: Electromagnetics

For more information please contact:
Terry Lombard at 575.646.2791 or tlombard@nmsu.edu