

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:

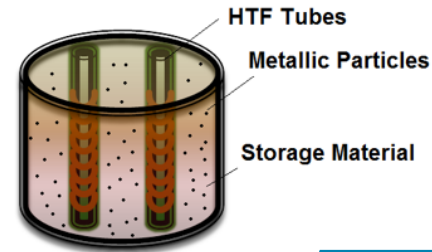
- Utilizes an external, alternating electromagnetic field
- Induces significant artificial vibration/translation of the particles
- Rapidly increases the heat transfer in TES
- Added high conductivity metallic particles

ADVANTAGES:

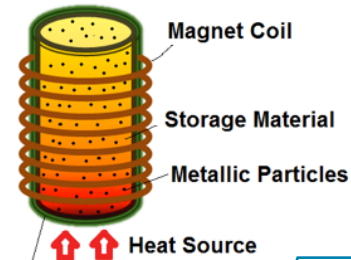
- High energy density
- Simultaneous heat transfer enhancement
- Light weight
- Low cost

POTENTIAL APPLICATIONS:

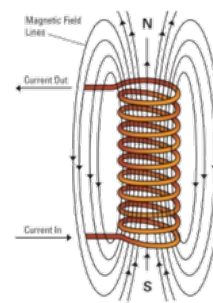
- Power generation: solar, geothermal
- Waste heat recovery
- Thermal management of defense/military electronics
- Space based power generation systems
- Battery thermal management in automobiles
- Dairy industry (pasteurization)
- Greenhouses



TES Container **CONFIGURATION 1**



TES Container **CONFIGURATION 2**



MAGNETIC FIELD DIRECTION

Faraday's law of induction

INVENTOR(S) EXPERTISE

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