A Battery Prototype Pilot-Line at LiFeSiZE AB

... for upscaled LIB, SIB - and supercap - proof-of-concept studies

WHAT CAN WE DO?

Slurry optimisation:
- state-of-the-art mixing
- state-of-the-art rheology

Electrode coating line:
- up to 10m/min
- max. width: 35 cm
- 6m dryer

PROTOTYPE PILOT-LINE:
- electrode hot calendering
- ”electrode-stacking” mode
- incl. degassing procedure

Quantities needed:
- < 100g – a ”one shot” batch
- > 1kg – slurry optimisation
>>> a series of cell batches

Interested?
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Financed by: Energimyndigheten

A prototype cell:
- up to 2Ah

Cell testing:
- up to 100A
Closed Brayton cycle with dissociating gas

Cycle efficiency
- \( \eta = 0.07 \) @ \( T_{\text{hot}} = 373 \text{K} \)
- \( \eta = 0.12 \) @ \( T_{\text{hot}} = 423 \text{K} \)

Rapid response to transient
Potentially very compact heat-exchangers
Suitable candidate for WHR if ...

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Sources:
https://geektimes.ru/company/mailru/blog/287954/
Future adaptable products make it possible to use products and components over a longer period, and thus reduce waste, and benefit from technological innovation by upgrading components that improve environmental performance.

Why:
This is critical for manufacturers who want to offer products, features through service-based, circular business models.

Hypothesis: The increased business risk for vehicle manufacturers & customers that vehicle remains attractive and functional over time can be managed by making vehicles more future-adaptive.

There is a large potential for energy efficiency through reuse, remanufacturing and upgrading of propulsion technology.
Fuel Cell range extender offer the best of two technologies:

- Good weight-to-kWh ratio
- Quick refueling
- Heat available from FC
- Run battery optimal
- Option to use shore power for charging
Nano-optisk batterisensor för realtidsmätning och kontroll av materialförändringar och temperatur

Patrik Dahlqvist, Insplorion AB

11:30 – 11:45 5/10 Energilager 2 - Session 15