

task_5ztn80yw2uibcsxr_with_calculation

Student Group

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Exercise E1 Conversions: Battery

2. How many minutes could a battery with 10 kWh of energy supplied by a provided engine power for thermal time?

Result:

$t = 200'000 \sim \{\text{min}\}$

There are additional losses:

$W = 10 \sim \{\text{kWh}\} = 10'000 \sim \{\text{Wh}\}$ $t = \frac{W}{P}$
 • The battery has an internal resistance. Depending on the current the battery provides, this leads to internal losses.

- The internal resistance of the battery depends on the state of charge (SoC) of the battery.
- The wires also add additional losses to the system.

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