

Finding recyclable plastics for Nickel-Metal Hydride Batteries

BACKGROUND

Nilar AB is a company that develops and produces industrial bipolar nickel metal hydride batteries. The batteries have a great advantage through its simple design which facilitates recycling. Nilar is continuously working to improve all phases of the battery's life cycle in order to minimize environmental impact. Nilar AB participates in the project "Process development for reuse and / or recycling of Nickel" financed by the Swedish Energy Agency as a part of that project Nilar AB want to investigate if it is possible to recycle the current used plastics within the battery in existing recycling streams, and/or if it is possible to find a plastic material that can be used in our existing product and in the next generation product to increase the total recycling rate.

TASKS

- Study suitable recycling streams for the current used plastic material.
- Study possible recyclable plastics that can be used in existing product and in the next generation of our product and maintain the mechanical properties.
- Finding suitable methods for investigating quality of recyclable plastics.
- Literature study and contacting plastic producers.
- Perform experiments at Chalmers regarding quality parameters



Nilar battery packs

GOAL

- Increase recyclability of the plastics of our existing product as well as next generation product.

WORK EXTENT & CONDUCTION

- 30 credits, 20 weeks
- One student
- Preferably the student/students should be positioned at Chalmers and parts of time at Nilar during the thesis

CONTACT & INFORMATION

<i>Contact Chalmers</i>	<i>Contact Nilar AB</i>
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