**Master Thesis project: Cell Design Engineer**

**Background of thesis project**
Applications of Battery Electric Vehicles (BEVs) are increasing rapidly. Design the cell is one of the crucial and key components for BEVs, since the cell in the base of building module and pack. Therefore, it is very important to study the swelling behaviour for the cell and to have a deeper understanding, especially for module and pack design from a heavy duty automotive prospective.

**Suitable background**
This thesis is suitable for an engineering student with educational background within the field of Design and Product development, Material Science, Mechanical Engineering, Chemical engineering, Physics and/or Chemistry. Understanding the physical and mechanical properties of materials and the cell design are a merit.

**Qualifications**
- MSc Engineering student in the field above or similar. Ready for thesis work 2023.
- Design of new measurement.
- Previous knowledge in CATIA is merit.
- Study possible and available can materials.
- Develop and review mechanical design and models for cell can.
- Communication skills and ability to document a work process in steps.
- Fluent in English, spoken and written
- Having knowledge in Lithium-Ion battery and mass transport phenomena is a merit.

**Description of thesis work**
The master thesis project aims studying the main challenges in Li-ion cell, which is the swelling process. To overcome this problem, you will study how to control the swelling in the cell can, by designing different type of prototypes for cell can and measure the swelling in each case.

**Thesis Level:** Master
**Language:** English
**Starting date:** January 2023
**Number of students:** 01

**Tutor**
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