

# Master thesis / Bachelor thesis /Project work

## *Quality management in battery production*



*Image source: PEM*

### **Initial situation:**

The megatrend of electrification in the automotive industry is leading to increasing demand for traction batteries. At present, the battery cells for this are still mainly manufactured in Asia, but in the future they are also to be mass-produced in Europe. To this end, research is already being conducted into competitive battery production. In order to be able to realize cost-effective and reliable cell production, it is necessary to establish a profound understanding of quality throughout the entire production process. For example, there is currently no general standard for quality testing procedures in battery production, so there are various challenges in implementing a quality concept in practice.

### **Your task:**

First, generally applicable QM methods (e.g. FMEA, SPC, etc.) are to be researched and evaluated with regard to their suitability in battery production using independent evaluation criteria. In addition, challenges in the application of classical QM methods in battery production will be identified and initial approaches for improvement will be derived. To this end, individual production process steps are to be examined as examples with regard to the causes and risks of errors in the production process. The different scaling levels (research, pilot and series production) will be taken into account.

### **Prerequisites:**

- Degree in (industrial) engineering (or comparable)
- Structured way of working
- Good knowledge of PowerPoint, Word and Excel

### **Offered:**

- Fast processing
- Defined tasks and flexible processing
- Professional supervision and insight into industry and practice
- Independent execution with consultation via Microsoft Teams

### **Interested?**

Please send a current transcript of records as well as curriculum vitae and references to the e-mail address below.

### **Your contact at PEM:**

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