GKN AEROSPACE

Master thesis
30 credits/20 weeks
1-2 student

Social Life-Cycle Assessment of Aerospace Engine Components

Project Background

Sustainability is a growing concern for the aerospace industry today, like in the whole world. While there currently is a large focus on climate impact of the industry, there is also a large focus on social impacts such as safety while flying and safety in production. However, there is a growing concern about sustainability impact of the whole value chain and other impact categories. Incorporating Social Lifecycle Assessment (S-LCA) into aerospace engine design and manufacturing, could be important means for taking a larger ethical responsibility in aerospace development.

The purpose with this master thesis project is to investigate and compare different S-LCA methodologies and social impact categories and their relevance for the aerospace industy, and see how S-LCA can address the challenges of the industry.

Assignment Description

The thesis work will focus on:

- Review of existing S-LCA methodologies and compare these in terms of their applicability and effectiveness in the aerospace industry
- Review social impact categories, their relevance to the aerospace industry and how these can be measured
- Investigate the challenges and benefits of conducting S-LCA on aerospace products
- Test suggested methodology on selected aero-engine component

The thesis work will be supported by sustainability specialist and LCA engineer at GKN Aerospace Engines. We would prefer if the student(s) can perform most of the work on site at GKN Aerospace Engines headquarters in Trollhättan. Thesis works at GKN are compensated 1 000 SEK per university credit upon completion.

Qualifications

- Master in product development, sustainability engineering, mechanical engineering or similar
- Knowledge of lifecyle assessments
- Interest in sustainability and ethical supply chains

Apply by

Send your resume and cover letter to Johanna Nylander and Isak Rehnberg at:
Info.EnginesSustainability@gknaerospace.com

Last date for application: 2024-11-30. Interviews will be held continuously and the position could be filled prior to the last application date.

About us

GKN Aerospace is a multi-technology leader in the aerospace industry, with two market-leading aerospace divisions: Engines and Structures. Our mission is to be the most trusted and sustainable partner in the sky. Engines' innovative system solutions offer significant improvements in performance and fuel consumption.