# Shaft material testing taking into account heat treatment and micro structure

## Background

Energy efficiency and CO<sub>2</sub> reduction are two of the main focus areas when we develop the driveline systems for the future. Important elements in reaching the targets of CO<sub>2</sub> reduction are hybridization and electrification of vehicles. BorgWarner currently manufactures transmissions, 4WD couplings and transfer cases for 4WD ICE, hybrid and electrical vehicles and we are continuously evaluating new technologies for our future products, but also trying to better understand and simulate our current products.



#### Challenge

- Design and oversee manufacture of test rigs and test pieces for SN testing
- Oversee and carry out material SN testing, correlate results and update Analysis & Simulations department calculation tools with data

The work will preferably be conducted at BorgWarner in Landskrona and is suitable for 1 person.

Knowledge of materials and heat treatment is preferred.

## Reporting

The master thesis shall be reported as a written report, a test rig setup, measurement data and an oral presentation at BorgWarner.

## **Contact Person**

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