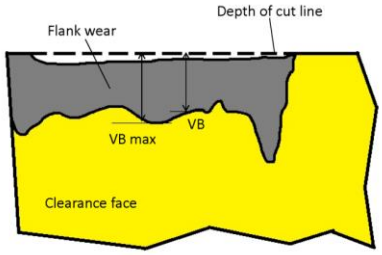
Master Thesis - “Tool wear: data acquisition and analysis in the digitalized era” (30 credits/20 weeks – 1 student)

Project Background

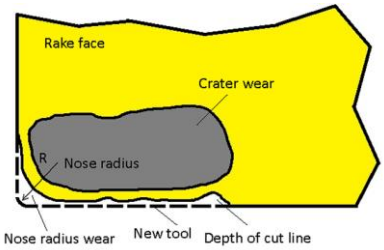
The high quality and fine tolerances are vital for function, safety and efficient operation of critical jet engine parts. Several cutting tools are required to machine each part, thus the need to change them just in time for further machining operations.

Data acquisition and analysis of tool wear can further affect the utilization of cutting tools. However, the amount of data recollected for hard-to-machine materials is limited. Thereby the importance of an agile data acquisition method and the further analysis and evaluation of the recollected data.

Example of acquisition method



Flank wear



Crater wear

Assignment Description

- Familiarize with the topic
- Survey data acquisition methods
- Dara acquisition
- Identification of wear: e.g. notch, flank, crater wear.
- Measurements of wear
- Analyze and evaluate data
- Data correlation with tool wear models
- Document and present results

The assignment offers a unique opportunity to perform both hands on data acquisition and data analysis in a creative environment.

Qualifications

Student in the final year of their M.Sc. studies in the field Production Engineering, Advanced Manufacturing, Mechanical Engineering or similar with a strong interest in manufacturing and automation.

Apply by

Send your resume and cover letter to Ana Bonilla, ana.bonilla@gknaerospace.com, +46 700 87 36 41

Interviews will be held continuously.