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Academic thesis, which with the approval of the Royal Institute of Technology, will be presented for public review in fulfilment of the requirements for a Doctor of Engineering in Machine Design.

The public review is held in Room Gladan on Friday, June 4th, 2021 at 10:00 AM. Room Gladan is located at floor 3, at Brinellvägen 85, Royal Institute of Technology, Stockholm

Abstract

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Keywords

KW1, KW2, KW3, KW4, KW5

Sammanfattning

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Nyckelord

KW1, KW2, KW3, KW4, KW5

Preface

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List of appended papers

Paper A

Author1, Author2, ... *"TITLE"*. Journal. Accepted date

Paper B

Author1, Author2, ... *"TITLE"*. Journal. Accepted date

Paper C

Author1, Author2, ... *"TITLE"*. Journal. Accepted date

Paper D

Author1, Author2, ... *"TITLE"*. Journal. Accepted date

Paper E

Author1, Author2, ... *"TITLE"*. Journal. Accepted date

Division of work between authors

Paper A

CRedit authorship contribution statement

Paper B

CRedit authorship contribution statement

Paper C

CRedit authorship contribution statement

Paper D

CRedit authorship contribution statement

Paper E

CRedit authorship contribution statement

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Nomenclature

Efficiency Parameters

η Efficiency [-]

Gear Parameters

a Centre distance [mm]

Chapter 1

Introduction

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1.1 Research questions

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- Q1
- Q2
- Q3
- Q4
- Q5

Chapter 2

Background

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Chapter 3

Method

3.1 Section

3.1.1 Subsection

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Chapter 4

Summary of appended papers

Paper A:

TITLE

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Paper B:

TITLE

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Paper C:

TITLE

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CHAPTER 4. SUMMARY OF APPENDED PAPERS

Paper D:

TITLE

A method of quantitatively assessing the form change during a pitting test is presented. The article is based upon the method presented in paper B; an improved method for fitting the measured profiles to the theoretical involute profile was developed. Measurements were taken in-situ of the gear flank during FZG pitting test; the profiles were thereafter fitted via an optimisation routine in order to be able to directly compare them. It was found that both cumulative tooth wear as well as stage wear (the profile change in regard to the previous test) could be monitored with high accuracy. It was furthermore possible to detect minute profile changes before any visible pitting damage was observed on the gear flank. The fitted measured profiles can be used to obtain local wear coefficients that can be used in wear simulations.

Paper E:

TITLE

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Chapter 5

Discussion

5.1 Research questions

In this section, the research questions formulated in section 1.1 are answered and discussed.

Q1

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Q2

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Q3

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CHAPTER 5. DISCUSSION

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Q4

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Q5

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Chapter 6

Conclusions

The following conclusions can be made from the research questions presented in Section 1.1:

- Conclusion 1
- Conclusion 2
- Conclusion 3
- Conclusion 4
- Conclusion 5
- Conclusion 6

Chapter 7

Future Work

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Bibliography

- [1] Author1 and A. 2, "Name of reference," *Name of journal*, vol. 59, pp. 1–10, 2014, ISSN: test. DOI: test. [Online]. Available: test.

Chapter 8

Appended papers

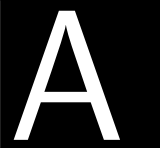
CHAPTER 8. APPENDED PAPERS

Paper A

"TITLE"

Author1, Author 2, Author XX

Journal Year



CHAPTER 8. APPENDED PAPERS

Paper B

"TITLE"

Author1, Author 2, Author XX

Journal Year

A large, bold, white capital letter 'B' is centered within a solid black square.

CHAPTER 8. APPENDED PAPERS

Paper C

"TITLE"

Author1, Author 2, Author XX

Journal Year



CHAPTER 8. APPENDED PAPERS

Paper D

"TITLE"

Author1, Author 2, Author XX

Journal Year



CHAPTER 8. APPENDED PAPERS

Paper E

"TITLE"

Author1, Author 2, Author XX

Journal Year

