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PREFACE

Write the preface (Forord) in this section.

The preface usually contains the formal information like, type of work, when, where, supervisors, other involved parts, acknowledgements, etc.

ABSTRACT

Write a summary in English in this section. If the report is in Danish, please also write an abstract in Danish (=Resumé).

This contains a brief description of a) content of the report, b) achieved results and c) if necessary additional data such as practiced methods. If the report is for a specific group then the can begin with the addressee. In this way the reader can quickly evaluate if the report is relevant to him/her.

The content of this chapter should not exceed one page.

RESUMÉ

(If the report is written in English, you do not need this section.)

I denne resumé (=Abstract) beskrives kort på dansk a) hvad rapporten omhandler, b) hvad der er opnået og c) evt. andre centrale forhold f.eks. den anvendte metode. Hvis der er en bestemt målgruppe for rapporten kan resumeet med fordel startes med hvem rapporten henvender sig til, så læseren direkte kan vurdere, om den er relevant for ham/hende.

Teksten bør ikke fylde mere end én side.

SYMBOLS

Symbol	Unit	Definition
R	ω	Resistance

Note: This section can be deleted if you do not need it – see section 3.4 for how to do it without messing up the headers.

TABLE OF CONTENTS

1 INTRODUCTION

This chapter is an introduction to the report, which can include the sections which will be described here.

NB. The reader, who just needs a quick overview of the report will typically read the resumé, introduction and conclusion. These sections have to be complete in themselves and be able to describe: The content of the report (in the introduction) and the achieved results (in the conclusion)

1.1 Background

In this chapter a brief introduction to the complexity of the problem is described. This leads to the next chapter where the problem of the project is formulated. The project has to be set in a wider context explaining the social considerations and impact etc.

1.2 Formulation of the problem

Formulating the problem is the corner stone of the project and great care must be taken in how this is written.

A short, concise guide to the content of this chapter concerning formulating the problem should be presented as open questions. It is vital that the content of the problem formulation correlates with the content of the actual report. Reports are heavily penalised when they are being graded by the examiner if the formulation of the problem does not match the content of the report. This means, however, that the problem formulation can change during the course of the project if something happens to alter the focus of the project itself. This can only happen with the approval of a student councillor.

The development of high-temperature superconducting materials is so advanced, that it is possible to produce conducting materials for practical applications. Based on this the following questions will be addressed during the project:

- How is a high-voltage cable based on high-temperature superconducting materials constructed?
- What are the technical, economic and environmental advantages and disadvantages of high-temperature superconducting cables?
- What is the potential for the application of high-temperature superconducting cables in Denmark?

This is an example of the formulation of the problem, which is based on the underlying problem position, that there is a new type of material, which you can begin to apply in

practice. This naturally raises the question whether there is a potential for the use of this material in Denmark. The formulation of the problem provides for answers to the three specific issues that have been built up as consecutive logical questions. The questions have to be answered in such a manner that each question gives a foundation for answering the next question. Each question builds on the previous question. The questions will be the factor, which determines the content and order of the report's individual chapters.

1.3 Methodology, scope and conditions

This section describes the methods of the project's various components, which have been chosen. Is the method for the individual cases based on one of following focal points: on cases, theory, real data, synthetic data, certain methods of analysis, experimental work, etc.

This chapter describes any major limitations, which have been assumed, such as system wise, geographically or time wise. If certain phenomena is disregarded it has to be stated here. If it is assumed that certain conditions have to be present or fulfilled, they have to be explained in this section. Explanations regarding the importance of the boundaries and conditions within the valid boundaries of the results, are described here.

The technical and scientific methods, their limitations and assumptions and the reasons for the chosen methods can be mentioned here. These topics are however primarily described in the main report.

1.4 Knowledge accumulated by others

This section publishes the state-of-the-art for the topic of the scope, which is handled in the report, with references to other sources of relevant knowledge. It is described how this knowledge, from an external source, corelates with the context of the project, and what essential knowledge the project is based on. If the project is part of a bigger collaboration it can be described here.

1.5 Readability

If the report is greater, an brief readability guide, describing the report's major components and construction, can be added.

2 ABOUT WRITING A REPORT

This chapter contains advice and hints concerning the writing of the report. Before initialising the writing of the report it is always good idea to study the construction of report written by others – it can prove instructive.

2.1 Title of report

The title should be decided from two opposing criterias which can be a source of conflicting criteria. It has to be as short and as concise as possible.

A way of testing the title is reading it word by word and evaluate whether the word is both essential and required.

In addition to that imagine what a third party would expect to read solely from reading the proposed titles. Does it match the content of the report? Asses how the title can intrigue people in the target group to read the contents of the re-port. Is the title appealing?

2.2 Chapter, sections and headlines

Just like the title of the report has to match the report's contents, the headlines has to match the contents of the chapters and sections.

Make sure that the reports sections seem connected and match the formulation of the problem. It will not necessarily correspond to the order in which the surveys and experiments etc. were carried out.

Details like experimental data, documentation etc, can benefit from being placed in the appendix.

If a bigger chapter is written a brief introduction to that chapter can be inserted in the beginning of the chapter. For inspiration read the intial tekst to this chapter. Such a meta tekst can help the reader when reading the report.

2.3 Body text

Be sure to write as concisely as possible. It is not a quality to use a lot of words. Use technical terms and avoid using several different words for the same thing - in a scientific / technical text it is simply confusing.

If a word is to be highlighted, you can use italics. Use it sparingly.

Get a fellow student, girlfriend or else to proof read the report for spelling, usage, etc. A frequent and often disturbing error are splitting words. In contrast to the use of English Danish often combine words. When Word puts red lines under a word it does not necessarily mean that it is misspelled. There are a myriad of complex (especially technical) words, that Word does not know, and therefore erroneously mark as misspellings.

It's a good idea to set a text aside for 8-10 days or more and then reread it again. You can catch many errors and ambiguities in such a review. Meanwhile, you can write in other parts of the text or do other type of works essential to the project.

2.4 Further guidance and advice on writing a report

You can among other places find advice on writing a report in the brieflet *"How to make reports – and improve your grades"* published by Ørsted • DTU. You can obtain the folder by asking the student guidance for a copy.

Also you can look into *D. Evans, P. Gruba, "How to write a better thesis", Melbourne University Press, 2002.*

3 LAYOUT AND USE OF THE TEMPLATE

This chapter describes how to use the template for the report. The template is set up as the format the report should meet and is used at Center for electric power and energy. Please do not change the setup of the template, styles etc.. A frequent problem when using the template is corruption in the text close to the headline and the headlines. Read more on this in chapter 3.4.

3.1 Front page

The report template contains two covers, one with and one without background graphics, both of which are mandatory. Formats, fonts, layout, etc. must not be altered.

If there are multiple authors write each person's name on its own line below each other. There is only written the name, not the title, student number, etc..

If there is no subtitle delete the whole line with the phrase subtitle, so there is a blank line between the title and the line stating the report type and date. In the box type of report write one of the following types of reports found in the table below.

Table 3.1. Text, which has to be used to designate the type of report

Type of report	Text
Final PhD report (UK)	PhD Thesis
Civilingeniør eksamensprojekt - gammel ordning (DK)	Eksamensprojekt
M.Sc.thesis – old scheme (UK)	Master'sThesis
Bachelorprojekt/Diplomprojekt (DK)	Bachelorprojekt
Bachelor/diploma project (UK)	Bachelor's Thesis
Polytechnic interim project	Polytechnic Midtvejsprojekt
Final report from the special course	Special course
Final report from the company project	Company project

All the fields on the front page has to be filled in via the window, which can be retrieved by using Rapportdata the in the toolbar

3.2 Title page

The title page is located on a left side behind the front without the graphics.

3.2.1 Class

On the title page in the field class one of the text's in the following table should be indicated. Unless there are special circumstances reports will be assigned Class 1 (public).

Table 3.2. Text which has to be used to denote the class of the report

Class	Text
1. The report is public and can be distributed on DTU's homepage etc.	1 (public)
2. The report is confidential and cannot be distributed.	2 (classified)
3. The report can only be distributed according to agreement with the author. The agreement has to be written and signed by all the authors and be delivered to the guidance not later than when the report is being submitted.	3 (according to present agreement)

3.2.2 License

The authors of the student report is written under the title Licensee. Reports written by people employed by DTU Elektro are licensed to DTU Elektro.

3.2.3 Remarks

In the chapter for remarks a text shall indicate whether the report is written as part of a academic degree. If the report is not the final assignment of the study, the entire row with remarks has to be deleted.

You can add additional comments in the box if necessary.

Table 3.3. Text, which has to be used to designate a degree or title

Grad/titel	Tekst
Diplomingeniør (DK)	Titlen Diplomingeniør
Diplomingeniør (UK)	Bachelor of Engineering
Bachelor (DK)	Graden Bachelor i teknisk videnskab (BScE)
Bachelor (UK)	Bachelor of Science in Engineering (BSc)
Civilingeniør (DK)	Graden Civilingeniør
Civilingeniør (UK)	Master of Science in Engineering (MSc)
Ph.d. (UK)	PhD in Electrical Engineering

3.3 Chapter and appendix

The template consists of a number of chapters. There are pre-defined a number of chapters at the beginning of the document to which the report should contain. For shorter reports figure list, table list and symbol list may be omitted. For reports in English the chapter summary can be omitted. Note that the table of contents, list of figures and list of tables are automatically updated. Click F9 if you want to initiate an automatic up-date.

The chapters start on a right page. The template ensures that the section break.

The following chapter on deleting and establishing a chapter is material to avoid com-promised headers etc. (Great caution is required when handling the hidden section breaks etc.).

In order to delete a chapter select the text from the chapters header down to the section break (remember to include the section break) at the end of the section. Then press the Delete key (section break can be made visible using the Show / Hide ¶) .

Adding new chapters will be done by using the mantle New Chapter in the toolbar re-port . (This involves inserting a section break to prevent Odd pages, followed by Head-ing 1 style for chapter heading and line feed) . In order to consider the text in the table of contents the text has to be written correctly with the lower case and initial capital letters. For the Appendix, the New button Appendix instead of New Chapter.

Note that there is a section break between chapters. This is necessary and must not be deleted. If the section break is deleted by mistake, an error will occur as additional text over the heading. To prevent this add a new section break just before the header.

To get the page number and header on any blank left page at the end of a chapter , you can insert a blank page. This is done by pressing Ctrl - Enter.

3.4 Body text

The body text is written with the style Normal (Times New Roman, size 12, line spacing 1,2). When switching to a the new section a double line breaks (one blank line) is insert-ed.

Before headings, figures, tables, bulleted lists, etc., there must be a double liniept-shift (one blank line).

3.5 Hyphenation

The template is set up for automatic hyphenation. This works on the entire document.

You can choose to make manual hyphenation.

- Select Language | Hyphenation ... from the Panel controls
- Uncheck the box Automatic hyphenation
- Press the Manual button ... to make hyphenation

If automatic hyphenation is maintained difficulties could arise with the report title on the front page.

3.6 Figures

To insert a figure, go to Insert Picture/From File, locate and select a picture, and choose the method of insertion. Please turn off any Float Over Text feature; figures should al-ways be in line with text.

After the figure has been placed, it needs a Figure number and a Caption:

- Hit return once to place the cursor under the figure
- Hit the button Insert Caption Figure to insert figure numbering. In appendices use the button Insert Caption Figure Appendix instead

3. Layout and use of the template

- Do not modify figure numbering to include additional characters such as Figure 2-1(a), or Figure 2-1(a), as the List of Figures will not work properly. If you want to include sub-numbers include them under one common figure caption, e.g.: “Figure 2-1: (a) Text. (b) Text.”.

You can create cross-references using this button in the toolbar report. This is for example, a cross-reference to Figure 3.1.



Figure 3.1. Write a self-explaining caption. Captions are important for the reports readability



Figure 3.2. Example of two figure aligned side by side. Use a table as shown



Figure 3.3. Example of two figures aligned side by side

Below with a vertical setup writing the Title above and the text describing the figure below.

3.7 Tables

Use the style for the tables as in the example shown below.

To insert a table text, use the button Insert Caption Table. In the appendix, you may use the button Insert Caption Table Appendix. Table text is inserted immediately above the table.

You can make cross-references using this button in the toolbar. This is, for example, a cross-reference to Table 3.4

Table 3.4. Write a short self-explaining text

Title	Title
Table body	Table body
Table body	Table body

Table 3.5. Write a short self-explaining text

Title	Title	Title	Title
Table body	Table body	Table body	Table body
Table body	Table body	Table body	Table body
Table body	Table body	Table body	Table body

3.8 Equations

Equations should be indented by 0.75 cm. Equations are numbered on the right side with a number enclosed in brackets. The formula number shall consist of a chapter number and serial number separated by a period. This is handled by using the Insert button in the Equation toolbar.

You can make cross-references to equations using this button in the tool bar. This is, for example, a cross-reference to equation (3.1).

The following are examples of equations:

$$Y = \sum_i \frac{4k_i}{X_i} \quad (3.1)$$

$$Y = \sum_i \frac{4k_i}{X_i} \quad (3.2)$$

3.9 English/danish version of Word

This report template is designed both for an English and Danish version of Word.

Are you using a Danish version of Word, errors occurs for example in the headers that refer to the heading styles. To edit this, click WordUK Two WordDK whereby British style references will be replaced with Danish. You can convert back to the English version of Word using the button WordDK Two WordUK.

Here is a reference [?] and a another reference [?]

4 HANDING IN THE REPORT

Before the report is handed in the Class (the report can be published or familiar) and other issues such as need for hard copies and number of copies has to be discussed. Thesis and other student reports are uploaded as a PDF file to Campusnet no later than specified in the Project Agreement. Remember to write if the report is public or confidential.

Basic data, simulation models, etc. are delivered on a CD according to an agreement with the supervisor.

5 CONCLUSION

A In this chapter the conclusion is written. It can contain the following chapters.

5.1 Results

Use his chapter for a brief description of the main results, which have been achieved. Remember only to mention results which have not been mentioned prior.

5.2 Perspectives

Describe the results in a broader perspective, e.g.: What validity of the results is expected under other conditions? How do the report's findings impact the situation in a larger perspective? How does this work with other activities and results?

5.3 Future work

Describe the work, which is estimated as necessary to obtain further results with the described problem. Are there spin-offs, which are important. Are there areas, which are only sparsely covered and have to undergo further research. Is it possible to look into an entirely different method?

A WRITE APPENDIX HEADING HERE

The appendix can be written here.



Figure A.1. Write a self-explaining caption. Captions are important for the reports readability

It is possible to insert both figures and tables in the appendix.

Table A.1. write a short text for the figure, which is self-explaining

Title	Title
Table body	Table body
Table body	Table body

Following equation has been utilized in the appendix:

$$R = 5 \, \Omega \tag{A.1}$$

B WRITE APPENDIX HEADING HERE

The appendix can be written here.

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