**The Capstone Team Project**

**MEXX 411**

**Name of Project:** *MECHANICAL ENGINES*

**Group Name:** *TEAM MECHANIC*

**Group Members:**

|  |  |
| --- | --- |
| *Student no #1* | *Student Name and Surname #1* |
| *Student no #2* | *Student Name and Surname #2* |
| *Student no #3* | *Student Name and Surname #3* |

**Supervisor:** *Prof. Dr. XYZ HGT*

**Semester:** *Fall/Spring 202X*

**Submission Date:** *-------------- 202X*



**Eastern Mediterranean University**

**Department of Mechanical Engineering**

|  |  |
| --- | --- |
| **Jury Member** | **Signature** |
| **Assist. Prof. Dr.** |  |
| **Assoc. Prof. Dr.** |  |
| **Prof. Dr.** |  |

# ABSTRACT

* Summary of the problem
* Summary of significance of the project
* Summary of project objectives
* Summary of project constraints

**Keywords:**

# ACKNOWLEDGEMENTS

Acknowledgments may be made to individuals or institutions not mentioned elsewhere in the report who have made an important contribution.

# COPYRIGHT

“We the team members,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Member 1 Member 2 Member 3 Member 4 Member 5

Hereby assign our copyright of this design and the corresponding report to the Department of Mechanical Engineering, Eastern Mediterranean University. We also hereby agree that the video of our Oral Presentations ifs the full property of the Department of Mechanical Engineering.”

The publication of this report does not constitute approval by the Department of Mechanical Engineering, Eastern Mediterranean University or its faculty members of the findings or conclusions contained herein. It is published for the exchange and stimulation of ideas.

TABLE OF CONTENTS

[ABSTRACT ii](#_Toc143442116)

[ACKNOWLEDGEMENTS iii](#_Toc143442117)

[COPYRIGHT iv](#_Toc143442118)

[LIST OF FIGURES vii](#_Toc143442119)

[LIST OF TABLES viii](#_Toc143442120)

[LIST OF SYMBOLS and ABBREVIATIONS ix](#_Toc143442121)

[CHAPTER 1 - INTRODUCTION 1](#_Toc143442122)

[1.1. Detailed definition of the project 1](#_Toc143442123)

[1.2. Significance of the project 1](#_Toc143442124)

[1.3. Detailed project objectives 1](#_Toc143442125)

[1.4. Detailed project constraints 1](#_Toc143442126)

[1.5. Report Organization 1](#_Toc143442127)

[CHAPTER 2 - LITERATURE REVIEW 2](#_Toc143442128)

[2.1. Background information 2](#_Toc143442129)

[2.2. Concurrent solutions 2](#_Toc143442130)

[2.3. Comparisons of the concurrent solutions 2](#_Toc143442131)

[2.4. Engineering standards of the concurrent solutions 2](#_Toc143442132)

[CHAPTER 3 -DESIGN and ANALYSIS 3](#_Toc143442133)

[3.1. Proposed/Selected design 3](#_Toc143442134)

[3.2. Engineering standards 3](#_Toc143442135)

[3.3. Design calculations 3](#_Toc143442136)

[3.4. Cost analysis 3](#_Toc143442137)

[CHAPTER 4 - MANUFACTURING 4](#_Toc143442138)

[4.1. Manufacturing process selection 4](#_Toc143442139)

[4.2. Detailed manufacturing process 4](#_Toc143442140)

[CHAPTER 5 - PRODUCT TESTING 5](#_Toc143442141)

[5.1. Verification of the objectives of the project 5](#_Toc143442142)

[5.2. Verification of the applied engineering standards 5](#_Toc143442143)

[CHAPTER 6 - RESULTS and DISCUSSIONS 6](#_Toc143442144)

[6.1. The results 6](#_Toc143442145)

[6.2. The engineering standards 6](#_Toc143442146)

[6.3. The constraints 6](#_Toc143442147)

[CHAPTER 7 - CONCLUSIONS and FUTURE WORKS 7](#_Toc143442148)

[7.1. The conclusions 7](#_Toc143442149)

[7.2. The future works 7](#_Toc143442150)

[REFERENCES 8](#_Toc143442151)

[APPENDIX A: Electronic Media 9](#_Toc143442152)

[APPENDIX B: Standards 10](#_Toc143442153)

[APPENDIX C: Constraints 11](#_Toc143442154)

[APPENDIX D: Project Plan 12](#_Toc143442155)

[APPENDIX E: Engineering Drawings 13](#_Toc143442156)

[APPENDIX F: 14](#_Toc143442157)

# LIST OF FIGURES

Figure 1:

Figure 2:

Figure 3:

# LIST OF TABLES

Table 1:

Table 2:

# LIST OF SYMBOLS and ABBREVIATIONS

3D: Three Dimensional

# CHAPTER 1 - INTRODUCTION

## 1.1. Detailed definition of the project

## 1.2. Significance of the project

Note: Please discuss the relevance and contribution of your project to UNDP Sustainable Development Goals ((*Sustainable Development Goals | United Nations Development Programme*, 2023))

## 1.3. Detailed project objectives

## 1.4. Detailed project constraints

## 1.5. Report Organization

# CHAPTER 2 - LITERATURE REVIEW

## 2.1. Background information

## 2.2. Concurrent solutions

## 2.3. Comparisons of the concurrent solutions

## 2.4. Engineering standards of the concurrent solutions

# CHAPTER 3 -DESIGN and ANALYSIS

## 3.1. Proposed/Selected design

## 3.2. Engineering standards

## 3.3. Design calculations

## 3.4. Cost analysis

# CHAPTER 4 - MANUFACTURING

## 4.1. Manufacturing process selection

## 4.2. Detailed manufacturing process

# CHAPTER 5 - PRODUCT TESTING

## 5.1. Verification of the objectives of the project

## 5.2. Verification of the applied engineering standards

# CHAPTER 6 - RESULTS and DISCUSSIONS

## 6.1. The results

## 6.2. The engineering standards

## 6.3. The constraints

# CHAPTER 7 - CONCLUSIONS and FUTURE WORKS

## 7.1. The conclusions

## 7.2. The future works

# REFERENCES

*Sustainable Development Goals | United Nations Development Programme*. (2023). https://www.undp.org/sustainable-development-goals

# APPENDIX A: Electronic Media

# APPENDIX B: Standards

# APPENDIX C: Constraints

# APPENDIX D: Project Plan

# APPENDIX E: Engineering Drawings

# APPENDIX F:

Note: For further details please check the previous Capstone Project reports at

<https://me.emu.edu.tr/en/capstone-design-projects/previous-capstone-projects>