

HIGHER TECHNICAL INSTITUTE

**MECHANICAL ENGINEERING
DEPARTMENT**

DIPLOMA PROJECT

**DESIGN AND CONSTRUCTION OF
AN ELECTROLYTIC CELL FOR
THE PRODUCTION OF HYDROGEN
FUEL**

M/1031

**BY
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OF HYDROGEN FUEL**

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by

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Summary

This project is associated with renewable energy. Its main purpose is to analyze the different technologies of electrolysis and the design and construction of an experimental cell with the most promising technology. The approach followed was the construction of a proton exchange membrane electrolysis cell and check of its advantages, efficiency and performance. The main conclusions are that hydrogen is the energy medium of the future and that is respectable of research.

The author.....
Apostolos Kouroufexis

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Abbreviations

H₂

Hydrogen

H₂O

Water

O₂

Oxygen

P.E.M

Proton exchange membrane

M.E.A

Membrane electrode assembly

P.E.M.E

Polymer electrolyte membrane
electrolyser

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