

HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

IMPLEMENTATION OF QUALITY CONTROL  
PROCEDURES IN A SOFT DRINK INDUSTRY

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HIGHER  
TECHNICAL  
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# **IMPLEMENTATION OF QUALITY CONTROL IN A SOFT DRINKS INDUSTRY**

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Project Report

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## **ABSTRACT**

The general objective of the project is the study and implementation of quality control techniques in a soft drinks industry.

The company chosen was Pepsi-Cola, which is an International company, and special emphasis is given to quality.

The methodology used was statistical, by sampling, since hundred percent inspection is not recommended in such cases. Analytically, samples were taken during production and charts were plotted. Analysis, discussion and suggestions were following each chart. After the analysis of the charts, the main outcome is that six of the nice charts were out of control.

In the author's opinion it would be very beneficial for the company if the variations were minimized and other methods of inspections were adopted. As an example, the fill height level can not be measured by the height gauge since there is a greater variation in the volume of the bottles. Moreover, the full implementation of the quality control techniques is suggested, and quality cost was analyzed.

It is generally accepted that Pepsi-Cola company puts quality first and with little improvement it will reach excellence.

ABSTRACT

DEDICATION

ACKNOWLEDGMENT

CHAPTER 1

INTRODUCTION TO THE

CHAPTER 2

INTRODUCTION TO

*This project is dedicated to the  
memory of my uncle Savvas Vassiliou, who  
will always hold a place in my heart, to my beloved parents  
Giorgos and Maria Vassiliou for their values and principles,  
and to my friends Kyriacos Stylianou and Aristos Stavrou for  
their love and support.*

CHAPTER 3

EXISTING STATE

3.1. HISTORY

3.2. FAMILY

3.3. THE EXISTING

3.3.1. W-

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## CHAPTER 1

### INTRODUCTION TO THE PROJECT

The primary objectives of the project are:

1. to study the theory on quality control
2. to investigate the quality control procedures and methods in a manufacturing industry
3. to select specific products and suggest methods of improvement of the existing quality control practices
4. to carry out sampling measurements in order to test the effectiveness of the suggested techniques, by using various charts
5. to measure the process capability of the process by:
  - (i) Variable data
  - (ii) Attribute data
6. to carry out an economic comparison between the existing and proposed quality control procedures and techniques

### PROJECT LAYOUT

In order to enable the reader to focus on the topic of his interest, the project has been divided into six chapters.

Chapter 2: is an introduction to quality. In this chapter there is historical overview and concepts of quality are represented.

Chapter 3: is an introduction to the Pepsi-Cola company and its existing status.

Chapter 4: introduces the theory behind the control chart, the symbols used in calculations as well as the calculations.

Chapter 5: represents the implementation of quality control in the industry. The charts plotted, analysis and discussion on them and suggestions for improvement are represented in this chapter.

Chapter 6: represents a quality cost analysis and a rough cost estimation of implementing SPC was given.

Chapter 7: includes the overall conclusions of the project, the results of implementing SPC, and general suggestion that could be beneficial to the company.