

HIGHER TECHNICAL INSTITUTE
MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

M/886

IMPLEMENTATION OF STATISTICAL PROCESS
CONTROL ON AN EDUCATIONAL
ESTABLISHMENT

BY: PAPAPHOTOPOULOU ATH. EUGENIA

JUNE 2000

VOL. II

HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

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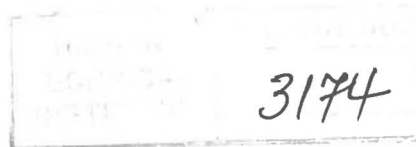
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VOLUME I



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CONTROL ON AN EDUCATIONAL
ESTABLISHMENT**

By

PAPAPHOTOPOULOU ATH. EUGENIA

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Project report submitted to the
Department of Mechanical Engineering
of the
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In partial fulfillment of the requirements for the diploma of
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VOLUME I

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 3174
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ABSTRACT

The object of this project is to study and implement on an Educational Establishment one of the Total Quality Management tools: Statistical Process Control (SPC).

Even though the methods of SPC are widely used in most every manufacturing industry and generally in all activities that have to do with the production of a product, in the educational systems are hardly used. Although, in most respect it would be a good method for improving the educational systems.

The implementation of SPC on the Higher Technical Institute was done for first time this year. This was a must due to the rates of failure that the Department of Mechanical Engineering have been faced the last years.

SPC was implemented with the aim to assist in the finding of the problems that caused this failure, to define the rates of failure and consequently to achieve "product" quality improvement by introducing corrective actions. In our case, to achieve the improvement of the system and its students.

For this, the grades of the students from the establishment of the institute have been examined for all the classes of the Mechanical Engineering Department, as well the students' failure.

There have been examined various subjects of the 3 years of studies in the Mechanical Engineering and their fluctuations which has shown with the pass of the years.

Also, there have been examined the amounts of the students entry in the institute in last years in order to determine the amount of students that desire to study in the institute. A close examination was made at all departments students entry, graduate and out-in ratio.

The great majority of SPC tools and techniques were used like brainstorming, cause and effect diagrams, histograms, team problem solving techniques and great extend of control charts. Also, the charts, which show the rates of failure, are included for understanding of the problem from the readers.

Analysis of the control charts has been done and the results show the problems that the Department of Mechanical Engineering and the institute faces.

Suggestions for improvement of the Educational System have been quoted. Hopping the recommended solutions to be implemented so that the institute gains its value again.

DEDICATION

To my parents for their support
and guidance all these years.

My sister Eleni who helped me
for the completion of this
project.

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**SPC REPORT CONTROL CHARTS OF TOTAL NUMBER OF STUDENTS
ENTERED AND GRADUATED** 172

- 1.MECHANICAL ENGINEERING
- 2.MARINE ENGINEERING
- 3.ELECTRICAL ENGINEERING
- 4.CIVIL ENGINEERING
- 5.COMPUTER STUDIES

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3.5" FLOPPY DISK CONTAINING ALL THE DATA ENTRY

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