

FINAL YEAR PROJECT REPORT
ADVANCED DIPLOMA IN MECHANICAL ENGINEERING
SCHOOL OF ENGINEERING , MARA INSTITUTE OF TECHNOLOGY ,
SHAH ALAM , SELANGOR.

TITLE : TO DESIGN A PURE BENDING TESTING FIXTURE.

by

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TABLE OF CONTENTS	PAGE
TITLE	i
PREFACE	ii
ACKNOWLEDGMENTS	iii
NOMENCLATURE	iv
CHAPTER 1 - INTRODUCTION.	1
1.1) An Overview.	2
1.2) Objective of the Project.	3
CHAPTER 2 - INTRODUCTION TO FIXTURE.	4
CHAPTER 3 - INTRODUCTION TO PURE BENDING	12
3.1) The Concepts	13
3.2) The Consideration of the Concepts	14
3.3) The Moment of Inertia	16
CHAPTER 4 - INTRODUCTION TO THE METHOD OF FATIGUE TESTING.	19
CHAPTER 5 - THE DESIGN.	23
5.1) Introduction to Design.	24
5.2) The Principles Requirement of the Design.	28
5.3) The Theory of Fatigue Design.	33

PREFACE

This project is taken as an alternative of pure bending testing which Shimadzu machine have some problems. The task, as far as the design is concerned is to match with the Instron dynamic machine 8032 and of course the dynamic loading will be a consideration .

The chosen of the suitable material are also the important part. The safety for the operator must be the first part that have to take as a concentration .

The designers have to find the best solution in order to get the best result so that the project will be categorized as a success.

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INTRODUCTION

1.1) An overview

According to the title of this project that is to design the pure bending testing fixture it is the philosophy behind it. The question like why this kind of fixture is needed or are there any reason for proposal to design the pure bending testing fixture ?

As far as the Shimadzu 10 kg.m bending & torsion machine type TB-10 is concerned, this machine also can do the test but there are some problems occur while testing is in progress. The problems, which act as the major are as follows :-

- i) The actual force acting on the specimen cannot be estimated precisely.
- ii) The frequency of the stress cycle (refer to Figure 4...) also cannot be determined accurately .

Therefore, the task to design the pure bending testing fixture is regarded .