



# **TECHNICAL REPORT ON THE STUDENTS' INDUSTRIAL WORK EXPERIENCING SCHEME (SIWES)**

HELD AT

## **TEMITOPE ENGINEERING ENTERPRISES**

Temitope engineering work, 269 Lagos high way sawmill, Ilorin, kwara state.

*BY*

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## DEDICATION

I dedicate this report to Lord for His Unlimited Grace, Consistent Love, Immeasurable Faithfulness, and for sparing my life throughout the period of my SIWES programme.

Secondly, I dedicate it to my parents **Mr & Mrs Suliamon** for their undiminished support and unquantifiable assistance throughout the whole exercise and beyond.

## **ACKNOWLEDGEMENTS**

First and foremost, my deepest acknowledgement goes to God Almighty for His overwhelming love upon my life throughout the Scheme.

I appreciate my parents Mr. and Mrs Sulaimon and friends for their constant help and support.

I also appreciate all staff members of Temitope engineering enterprise, especially my supervisor Engr. Salimon Rasheed who gave out of his tight schedules to attend to me.

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## **CHAPTER ONE**

### **1.0 INTRODUCTION TO SIWES**

In 1974, the federal government of Nigeria introduced the National policy on industrial training called the student industrial work experience scheme (SIWES).

This program is under the umbrella of the ministry of education through the Industrial Training Fund (ITF), was design to help student acquire the necessary practical education experience in their fields of study and other related professions.

The program was established basically to impact elaborate practical understanding to student with respect to their various discipline. It is also intended that the student through a process of relation to academic knowledge and practical industrial application would understand the underlying principle and become better focused and acquire the practical application toward excellence in his/her discipline.

The student are expected to develop occupational competence that would facilitate their fitting into the world of work after graduation.

### **1.1 AIM AND OBJECTIVE OF SIWES**

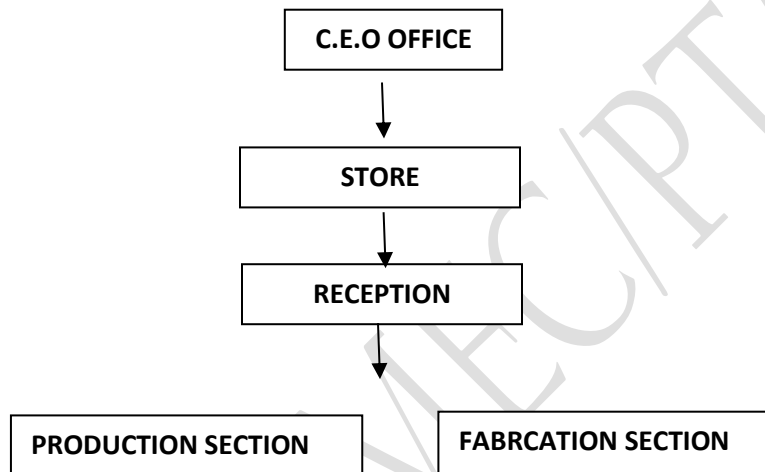
The student industrial work experience scheme (SIWES) has it major aims and objective of establishment. The following are the aim and objective of the program.

- i. To provide student an opportunity to apply their theoretical knowledge in really work situation, thereby bridging the gap between theory and practical.
- ii. To expose student to working method and techniques in handing equipment and machineries that is not available in their various institutions.
- iii. To make the transition from the institution to the world of work easier and thus enhance student contact for later job placement
- iv. To prepare student in skill development by participating in field works, particularly in writing report in their fields of works.

## 1.2 HISTORICAL BACKGROUND OF THE ORGANIZATION ATTACHMENT

**TEMITOPE ENGINEERING ENTERPRISE** is an indigenous company established in 2009 under the Companies and Allied Matters Act with the aims of focusing on improvement and enhancement of construction in our community at large. Its establishment also aimed at providing a better and approachable solution to the problem encountered in the Engineering sector by both private and individuals. This company stipulated its operation mainly on design, calibration, repair and construction of weighing scale and weigh bridge..

## 1.3 ORGANIZATION CHAT OF THE ORGANIZATION



## 1.4 MAJOR ACTIVITIES OF THE ORGANIZATION

Temitope engineering enterprises basically has two section which include:

i. Fabrication section

ii. Production section

I. **Fabrication section:-** They deal with the construction of design of machines

II. **Production section:-** They deal with the manufacturing of various component part of a particular by use of machine tools

## 1.5 WORKSHOP SAFETY

Safety is the preventive measure timely taken to guide against any form of hazard injury or accident in our daily activities in the workshop. Workshop safety is particularly focusing on ways of preventing danger particularly accident, injury a times death to personnel or other things around the operator while doing work. The following are the basic work shop safeties that must be comply with these include:

I. Always clean the machine and check the condition of the machine before working on it

II. Do not use the hand to stop the working machine

III. Do not play with any machine

IV. Know where the emergency stop buttons are positioned in the workshop in case of accident.

V. Always listen carefully to the supervisor and follow the instructions.



## CHAPTER TWO

### 2.0 BASIC WORKSHOP HAND TOOLS AND EQUIPMENT WITH THEIR FUNCTION

The following are the basic workshop hand tools and equipment used in mechanical workshop:

1. **Spanner:** - spanner are use in tithing a bolt and nut they are of different type's e.g flat, ring and socket e.t.c.
2. **Hammer:** - Hammer is mainly use in hitting, driving, and pulling some part of the machine or work piece. They are of different types which include: cross pane hammer, ball pane hammer, straight pane hammer and double face sledgehammer.
3. **Hand file:-** file are used for smoothing the surface of the work piece. They are different type of hand file:- Rough file, smooth file etc.
4. **Hack saw:** - it is use for cutting metal.



Spanner



Hammer



Hand File



Hack saw

### 2.1 SECTION OF THE ORGANIZATION AND THEIR SPECIFIC FUNCTION

The section of the organization include:-

- ❖ Fabrication section
- ❖ Production section
- ❖ Automotive section

#### **a. FABRICATION SECTION**

This section deals with cutting, bending and assembling of metal to form a given structure. Different methods are used in doing this include - grooving, welding, casting and machine e. t. c.

Various machine such as:-



**ROLLING MACHINE**

**ROLLING MACHINE:-** It is use for rolling a metal in to a circler part e.g production of a metal drum.



**ARC WELDING MACHINE**

**ARC WELDING MACHINE:-** For joining two or more metals together with the help of electrode.



**GUILLOTINE MACHINE**

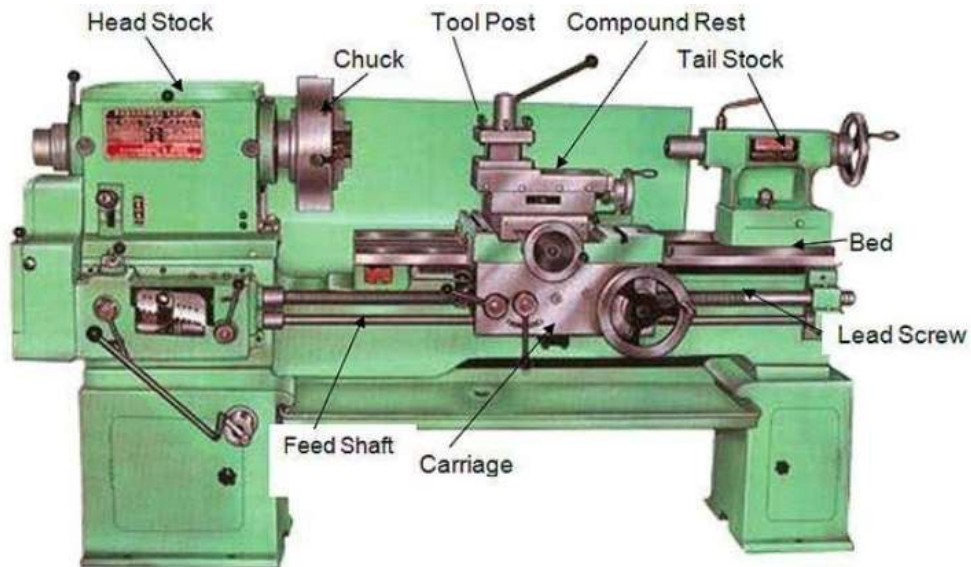
**GUILLOTINE MACHINE:-** It is use to cut sheet metal into straight edged pieces.



**BENDING MACHINE**

## **b. PRODUCTION SECTION**

The production section makes use of machine tools such as:-



**LATHE MACHINE**



**MILLING MACHINE**



**SHAPING MACHINE**



**DRILLING MACHINE**



**GRINDING MACHINE**

Drilling machine, grinding machine and shaping machine e. t. c. In producing part of an object with desire a good surface finish.

The machine tool in production section can perform various machining operation due to their versatility, operation like.- Drilling, Boring, Reaming, Counter sinking, Counter boring, Turning operation, Knurling and facing e. t. c.

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## CHAPTER THREE

### 3.0 STUDENT SPECIFIC INVOLVEMENT AT VARIOUS SECTIONS

I was involved in two section which is production section and fabrication section

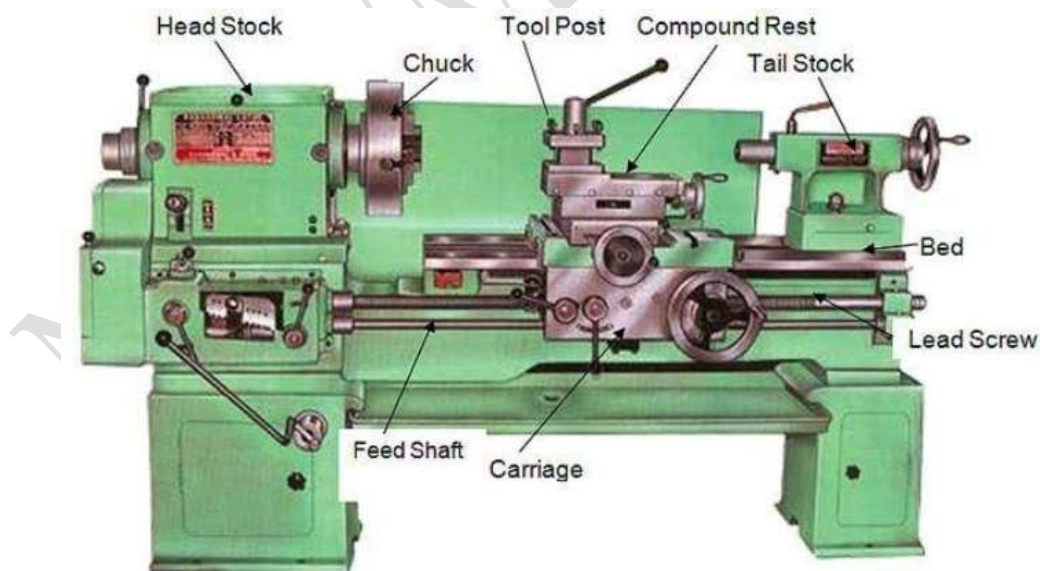
#### 3.1 PRODUCTION SECTION

The production section also known as machine workshop, it is a section that makes use of machines tool in performing any metal removing processes.

Machining is any various processes in which piece of raw materials is cut into desired final shape and size by controlled material removal process. The machining is done by the use of machine tools. Machine tools are machine for shaping, cutting, boring, grinding and shearing or other form of deformation. Example of machine tools include the lathe machine, milling machine, shaping machine, drilling machine and grinding machine.

#### LATHE MACHINE

The lathe machine is known as the father of all machine tool due to it versatility i.e ability to perform different operations e.g Turning, boring, Knurling, drilling and facing operation e.t.c.



## DRILLING MACHINE

Drilling is the process of originating the hole on the works piece

Drilling machine is the machine tool used in accomplishing the task of originating hole,reaming, boring, counter boring and other drilling operation.



## MILLING MACHINE

These are machine in which multi-tooth tools (cutter) are employed to perform metal removing operation, sometimes single tooth are used e.g fly cutter.





### **3.2 FABRICATION SECTION**

This section deals with joining of metals together by different method such as welding, grooving and forging.

There are various machine in the fabrication section this include:- Arc welding machine, guillotine machine, bench shears, bending machine and rolling machine.



**GRINDING MACHINE**



**ARC WELDING MACHINE**



**BENCH SHEAR**

## **CHAPTER FOUR**

### **4.0 EXPERIENCE GAINED**

During the four months program, I gained a lot especially in the fabrication section where by we weld a coal pot, hot plate with oven, And burglary window. All this gives me the knowledge of constructing and designing a project.

Also in production section, I learnt how operate various types of machine in the production workshop e.g lathe machine, shaping machine, grinding machine, milling machine and Drilling machine.

### **4.1 INTERPERSONAL RELATIONSHIPS WITH THE ORGANIZATION**

My four month SIWES program has equipped me the knowledge of mechanical engineering design in term of fabrication and production of a particular Project

During the course of staying with the coordinator in the various section has turn a new movement in my course of study like the production section in person of Engr. salimon.

### **4.2 SUGGESTION FOR IMPROVEMENT OF THE PROGRAM**

The Industrial training Fund should have up and hold a committee on inspecting the student in their various organization that they are attached to as this will improve the level of seriousness of the student to the program. Also the federal government in collaboration with the Industrial training Fund (ITF) to increase the student allowance for the program as this will encourage them in active participation.

## **CHAPTER FIVE**

## **5.0 CONCLUSION**

I found it interesting and I fully participated in it which in turn yields a successful result indeed it prepares me for future challenge in my chosen field. This SIWES program has turn out to be more interesting education due to the nature of the program itself.

## **5.1 RECOMMENDATION**

The experience I gained during my SIWES program cannot be over emphasized I was practically oriented I humbly recommend that the SIWES program should be made compulsory for student of engineering, fields in order to gain more experience in their course of study.