TECHNICAL REPORT ON THE STUDENTS' INDUSTRIAL WORK EXPERIWENCE SCHEME (SIWES)

HELD AT

KWARA STATE POLYTECHNIC, INSTITUTE OF TECHNOLOGY (IOT)

P.M.B 1375 ILORIN, KWARA STATE.

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SUBMITTED TO:

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DEDICATION

I dedicate this report to God Almighty 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 OYEWOLE** 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 OYEWOLE and friends for their constant help and support.

I also appreciate all staff members of kwara state polytechnic, especially my supervisor Mr. SULEIMAN 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 theorical 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.

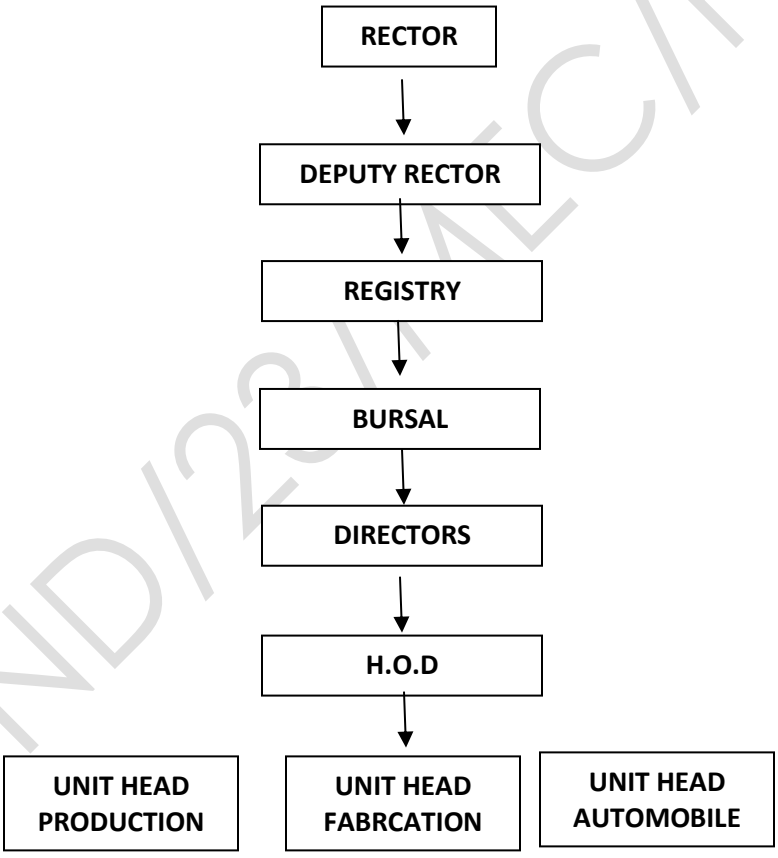
1.2 HISTORICAL BACKGROUND OF THE ORGANIZATION ATTACHMENT

Kwara state polytechnic was formally known as the Government Technology Training School, which was Later upgrade to kwara state college of technology, through the edict No j3 of 1987, this was later changed to kwara state polytechnic.

The institution also engage in other activities which differ from it academic activities this include:

- The construction of oven with not plate
- The construction of yam pounding machine
- Production of strap bolt and nut

1.3 ORGANIZATION CHAT OF THE ORGANIZATION



1.4 MAJOR ACTIVITIES OF THE ORGANIZATION

Kwara state polytechnic basically has three section which include:

i. Fabrication section

ii. Automobile section

iii. 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

III. Autornobile section:- They engage in maintenance, servicing and preparing of a motor vehicles.

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 use the right tools for the right job

VI. Always return the tool to its original place after use

VII. Always off the machine while you are not working on it

VIII. Always put on your safety boot, safety glove and other safety equipment.

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

Safety Boot

Safety Hand Glove

Safety Wears

Safety Goggle

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.

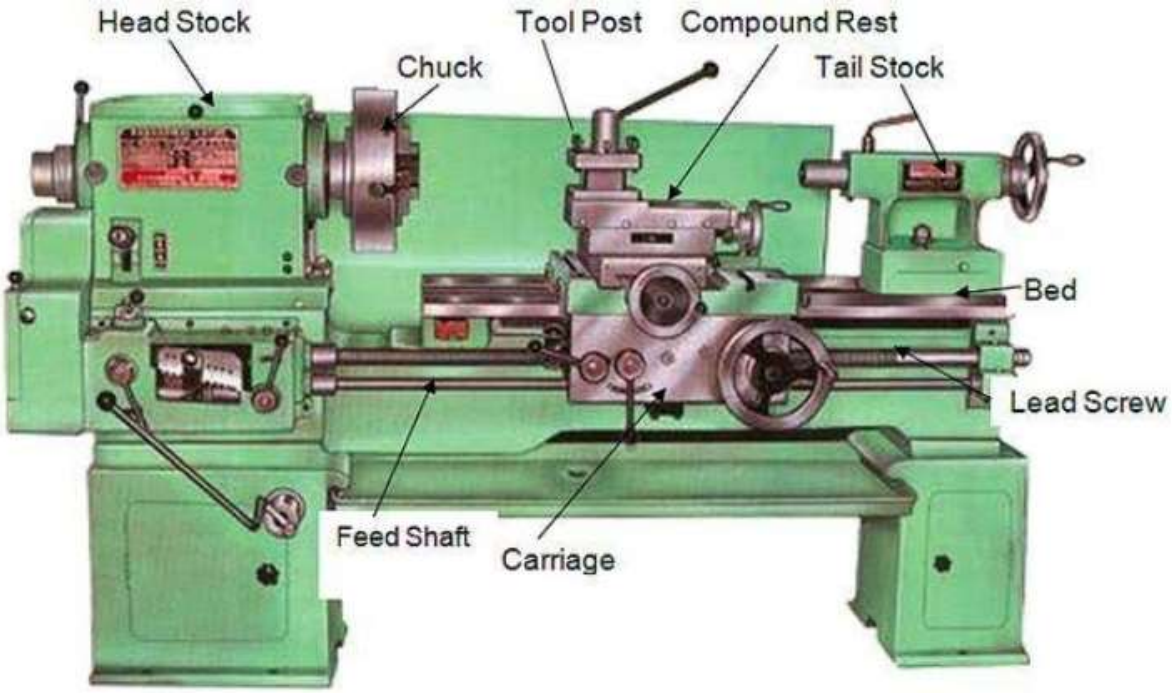
GUILLOTINE MACHINE

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

Pillar Type Drilling Machine

DRILLING MACHINE

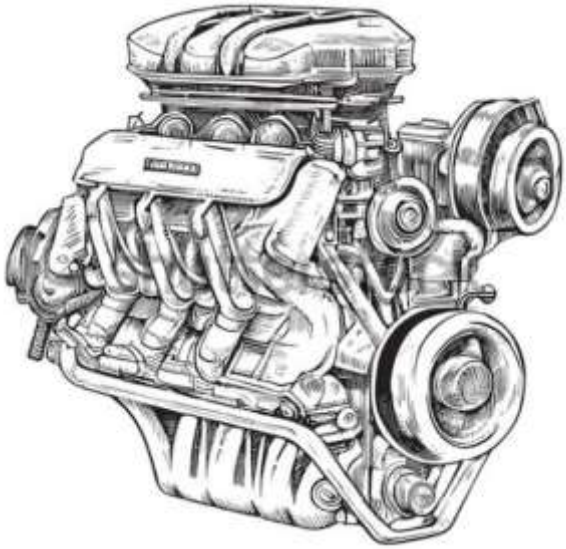
GRINDING MACHINE

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 matching operation due to their r versatility, operation like.- Drilling, Boring, Teaming, Counter sinking, Counter boring, Turning operation, Knurling and facing e. t. c.

C. AUTOMOTIVE SECTION

This is the section where preparing, servicing and maintenance of automotive such as:- Motor vehicles, Motorcycle, tricycle and car engine is been done.



CHAPTER THREE

3.0 STUDENT SPECIFIC INVOLVEMENT AT VARIOUS SECTIONS

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

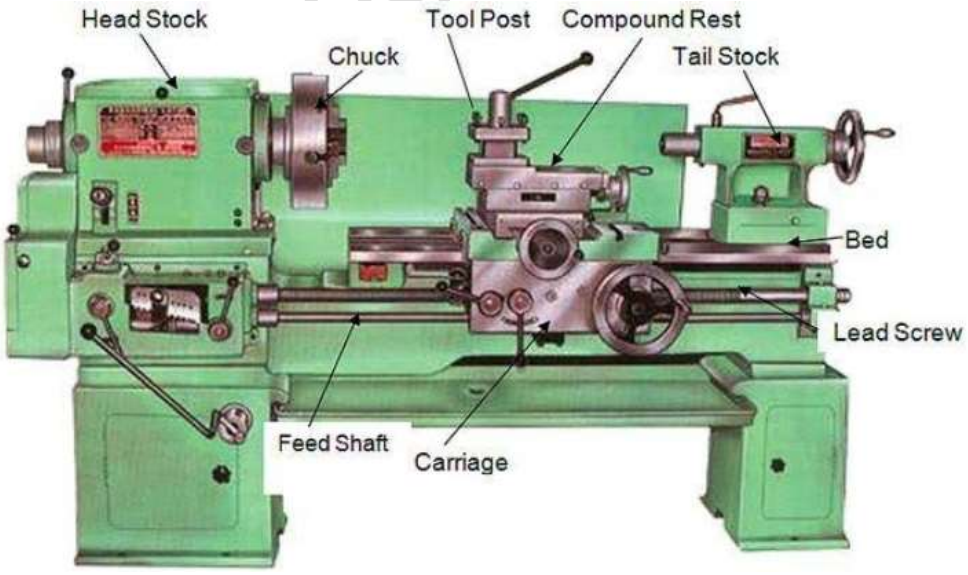
3.1 PRODUCTION SECTION

The production section also know 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, ctting, 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, morning, 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, dreaming, boring, counter boring and other drilling operation.

Pillar Type Drilling Machine

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.

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GRINDING MACHINE

BENCH SHEAR

ARC WELDING MACHINE

Protective Shade

CHAPTER FOUR

4.0 EXPERIENCE GAINED

During the four months program, I gained a lot especially in the fabrication section where by we cut plate in to sizes weld a coal pot 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. Dayo and Engr. Soliu in fabrication respectively.

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.