



**A TECHNICAL REPORT ON**  
**STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)**

**HELD AT**

**OLA OLUWA ENGINEERING CONSTRUCTION WORKS**  
**AROMARADU OPPOSITE G.D.S.S ADETA ILORIN, KWARA STATE**

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## **DEDICATION**

This report is dedicated to my family for their care and support during the SIWES program.

## **ACKNOWLEDGMENT**

I acknowledge the most beneficent and mercy God, for His support and knowledge giving to me to write this SIWES report may only HIM alone be praise.

I wish to thanks my parents MR. & MRS. Sammy Udoh for their support financially and spiritually during the SIWES programme.

I acknowledge the effort of my Industrial Based Supervisor ENGR. TUND E. for his effort in impacting knowledge to me during the SIWES programme, Sir I am very grateful.

Finally, I must acknowledge the effort of the lecturers in the Department of Welding and Fabrication and all SIWES students in the company for their effort in putting me on the right track. I pray that may God grant you your heart desire (Amen).

## **PREFACE**

The SIWES programmed was introduced into the nation's tertiary education system particularly science course student because of the belief that the general education would help student to acquire on their understanding of society and the place of the individual intervals.

It is in the light that the general studies programmes for polytechnic engineering student in Nigeria in the NBTE syllabus are aims to produce.

- a. To produce the students to proud of its antecedent.
- b. To make a citizenry conscious of its role in a wider would.
- c. To make the student prepare for effective leadership role in the diversified field in the society.

And also this thereby is to ensure the positive contribution to the national intervention and greatness, and also the expectation if will serve as a means of inculcating of the idea of national loyalty and understanding that based on the awareness of the nation's roof and cultural antecedents and it will enable the student to come to grips with our morals, national aspirations, values and problems.

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## **CHAPTER ONE**

### **1.0 INTRODUCTION TO STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)**

Student industrial work experience scheme is an industrial programmed purposely organized for student to learn the practical aspect of their course of study.

SIWES was established by ITF in 1973 to solve the problem of lack of adequate practical skills preparation for employment in industries by Nigeria graduate of tertiary institution.

It expose student to the needed experience in handling machinery and equipment which are usually not available in the educational institution.

Participation in siwes has become necessary for the award of diploma and degree certificate in specific discipline in most institution of higher learning. The program is meant for agriculture, engineering, technology, environmental science, education medical science, pure and applied science student. Four month for polytechnic and education and six month for the universities.

### **1.1 THE AIMS OF SIWES**

Siwes which stand for student industrial work experience scheme was initiated so as to complement the theoretical knowledge acquire in higher instit



ution with practical experience.

## **1.2 THE OBJECTIVE OF SIWES**

1. It expose student to work method and technique in handling equipment and machinery that may not be available in the institution
2. It provide avenue for student in practical aspect of their study.
3. It prepares the student from the challenges they may encounter in their course of study.
4. To improve the level of technology in the country.

## **1.3 IMPORTANT OF SIWES**

The importance of siwes in any academic institution cannot be over emphasized.

1. It help student in his/her course of study.
2. It expose student to all the machine and equipment in the course of study.
3. It increases the knowledge of students in practical aspect.
4. It improves the skill of a student.
5. It leads to entrepreneurship and self-business.

## CHAPTER TWO

### 2.0 HISTORICAL BACKGROUND OF OLA OLUWA ENGINEERING CONSTRUCTION

Ola Oluwa engineering construction work is a partnership company established in year Aromaradu opposite Government Day Secondary School Adeta, Ilorin, Kwara State.

It is a partnership company which came into existence from the co-operation of Alhaji Kehinde Suliman, Alhaji Abdul Ganeey and Mr. Idowu.

Ola Oluwa engineering construction works was a well known company it building and construction of filling station. They have another branch at airport with more than 30 workers. They work within and outside Kwara State. The company has trained more than 100 people in the aspect of fabrication and construction. The company also involve in construction of brick engine block and house gate.

### 2.1 ORGANIZATION CHART



## **2.2 MAJOR ACTIVITY OF THE ORGANIZATION**

1. Construction of filling station.
2. Rolling of Ring
3. Construction of Engine Blocks (brick).
4. Construction of Underground Tank
5. Construction of house gate

## **CHAPTER THREE**

### **3.0 DEPARTMENT/SECTION/UNIT OF THE ORGANIZATION**

1. Welding Department
2. Lathe Machine Operation Department
3. Drilling Department
4. Rolling Department
5. Bending and Cutting Department

### **3.1 SAFETY AND PRECAUTION OF THE ORGANIZATION**

1. Proper clothing should be worn when working on any machine.
2. Foot wear such as work boots that are thick soled shoe should be worn in the workshop.
3. Hand glove must be use by anybody working on the rolling machine.
4. Put on a protection glass always.
5. Correct tool must be use for each job.
6. Report any problem immediately.

### **3.2 FUNCTION OF EACH DEPARTMENT**

#### **3.2.1 Welding Department**

Welding is a metal joining process in which coal sense is obtained by the heat or pressure.

There are two type of welding operation carry out in this department:

- i. Arc welding

## ii. Gas welding

Arc welding is a process in which fusion is obtained by heat produced from electric arc between the work and an electrode. Grade 10 and 12 are the most common electrode used.

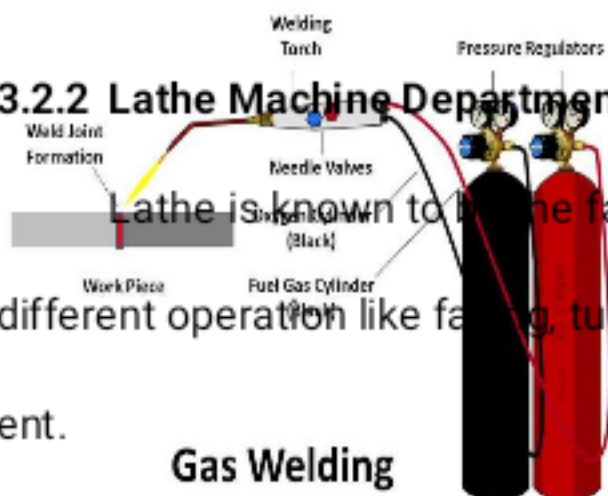
Gas welding is a process whereby the oxygen gas is being used together with acetylene gas to weld or cut metal.

## Arc Welding

### 3.2.2 Lathe Machine Department

Lathe is known to be the father of all machines. Lathe is used to perform different operations like facing, turning, boring, drilling, grooving in the department.

## Gas Welding





### 3.2.3 Drilling Department

Drilling is the process of creating hole in work piece. Sensitive bench drilling machine is one used in the organization.



### 3.2.4 Rolling Machine Department

This is the process of rolling a metal to a circular form called Ring. The rolling machine has three rolls; two are fixed while the third one can be adjusted up and down.

### 3.2.5 Bending and Cutting Machine Department

There are two types of bending machine in the organization manual bend





ing machine and hydraulic bending machine. The manual bending machine bends 1mm, to 2mm plate while the hydraulic bending machine can bend up to 4 to 6mm plate.



**Cutting Machine**

Hydraulic cutting machine is the use of cut different types of plate. It can cut from 1mm plate up to 12mm plate.



**Bending Machine**

## CHAPTER FOUR

### 4.0 ACTIVITIES PERFORM BY THE ORGANIZATION

#### 4.1 ROLLING OF RING

The rolling of rings is carried on a rolling machine. A metal plate is placed in between the upper and lower rolls of the machine. The upper roller can be tight and loose. After the rolling the two edge of the plate is going to be held together by electric arc welding using grade 10 electrode.

#### 4.2 CONSTRUCTION

Construct



two or more ring to

gether. A 4mm metal plate is cut by gas into a circular form used to cover the both edge of the ring.

Another hole is created to the top and cover by 4mm plate using bolt and nut, after this, a pipe is run into the tank from the compressor to check linkage of the tank, a water mix with soap is poured around the tank to check any linkage place.

### 4.3 CONSTRUCTION OF TRUCK

The organization constructs different type of long vehicle such as lorry, canter and truck. Metal steel is used in the construction.

### 4.4 CONSTRUCTION OF FILLING STATION

A filling station known as petroleum station is constructed by different a nd series of processes. After the site has been cleared and set for building of f illing station, a plan will be set.



The first thing to do by our organization is to arrange the underground ta nks that are going to be use at the site. A big large hole going to be dig for the tank, after the tanks as been fixed properly the next thing is canopy.

Canopy is a cover that fixed or hangs above, or a layer of something that spread over an area like a roof.

Construction of canopy is done by bending and rolling of 4mm plate which is used as a stand for the canopy it may be in circular form but most of the time it is bent and rolled in two sides. For every canopy there is 2 or 3 stands, after the stand has been embedded to the floor the canopy is now going to set over it. The shape of the canopy is either in square or rectangle a 4mm plate sometimes bent and sometimes plain is going to be on top of the stand that has been embedded to the floor and joint together by welding (arc welding).

A 1mm plate is used to cover the canopy to prevent rain and sun. the 1mm plate is divided and cut into three equal parts on a hydraulic cutting machine, before taking to the site for use.

All these are done after all the necessary licenses and permits are obtained



such as:

**DPR:** Department of petroleum resources.

**PPPRA:** Petroleum product price regulatory agency

**NNPC:** Nigeria national petroleum co-operation and other body.

The storage tank that is sink is varies in measurement 30,000 liters, 36,000 liters, 40,000 liters, 45,000 liters, 60,000 liter e.t.c.

## **CHAPTER FIVE**

### **5.0 CONCLUSION**

This training (SIWES) has given me an ample opportunity to appreciate and relate the theoretical knowledge being taught in class to the practical knowledge gained at the place of attachment in the field of science. Therefore, this period of practical exposure to the field practice of basic facets of science is an advantage for better productivity and creativity at this period and in future.

The training also showed that if the knowledge and experience acquired during the programme is fully utilized as a student scientist, the overall effect is that fully baked scientist would be readily available to take up welding work instead of the imported brains thereby giving room for economic growth and technological advancement of the nation.

### **5.1 RECOMMENDATION**

Student industrial work experience scheme (SIWES) program is a kind of privilege to the student for being exposed to the technological aspect of their field. Knowledge acquired enhanced the student in securing good future employment. Industrial training, a linkage between class theory and practice had greatly done well in practical knowledge update.

I have gained a lot which summary have been emphasized in chapter above in conclusion, industrial training is an account of the practical knowledge acquired is geared forward making the student realized how to put what have

e been studied on paper into practice.