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

HELD AT

OLAOLUWA ENGINEERING CONSTRUCTION WORKS

NO. 5, AROMARADU STREET, ILORIN, KWARA STATE, NIGERIA.

BY

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ND/23/WEC/PT/0003

SUBMITTED TO

DEPARTMENT OF WELDING AND FABRICATION ENGINEERING TECHNOLOGY,

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CERTIFICATION

This is to certify that the report was based on SIWES experience gained by **ADEOYE MOFEOLUWA BLESSING** with matric. number **ND/23/WEC/PT/0003** of Department of Welding and Fabrication Engineering Technology, Institute of Technology, Kwara State Polytechnic, Ilorin, Held at **OLAOLUWA ENGINEERING CONSTRUCTION WORKS, NO. 5, AROMARADU STREET, ILORIN, KWARA STATE, NIGERIA** as Part of the requirement of the course.

DEDICATION

This Technical report is dedicated to Almighty GOD, the Author of all Knowledge and it is equally dedicated my Parent (MR. AND MRS. ADEOYE) and all my family members for their Spiritual, Moral and Financial Support throughout the period of this programme, wishing them long life and a healthy life (Amen).

ACKNOWLEDGEMENT

I acknowledge the Highest GOD for His power and mighty work of love in my life helping me through the years of my studies.

My sincere gratitude and appreciation to my Parent (MR. AND MRS. ADEOYE) and all my other family for their moral and financial assistance at all times.

To all my lecturer goes this gratitude creating time to impact knowledge and making understand the importance of studying.

Finally, to my SIWES coordinator who has find time to help me out during the course of the programme.

PREFACE

The writing of this report was motivated by the experience gained during my SIWES attachment **OLAOLUWA ENGINEERING CONSTRUCTION WORKS, NO. 5, AROMARADU STREET, ILORIN, KWARA STATE, NIGERIA**, This report is meant to be a guideline to every student.

The purpose of writing this report is to relate the various area which I participated during the Industrial Training Attachment in my place of work. It is indeed very encouraging that all students to get acquainted with what is been done in class, so as to be familiar with what is been done in the practical field.

Finally, This Industrial Training Attachment is required for every student because it tends to backup and build the students physically, morally and educationally for the task after graduation.

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CHAPTER ONE

1.0 INTRODUCTION

It has been widely spoken and dispersed in the society that Tertiary Institution graduates are not practically oriented rather theoretical oriented owning to this; it has affected them both on the labour market and the society at large.

As a result of this, the Industrial Training Fund (ITF) came into existence which was founded by decree 47 of 1971 constitution introduced the Student Industrial Work Experience Scheme (SIWES) in 1973. Since its inception, SIWES has a suitable program which has been paving way for student in higher institution of learning to have practical knowledge of what they have been taught in their various institution of learning. It has since then been one of the pre-requisite for the polytechnic.

1.1 DEFINITION OF SIWES

The student industrial work experience scheme (SIWES) can be defined as a technical skill and acquisition of knowledge from the organization, industrial sector. It also serves as a motive that compliments the learning which student have acquired in the classroom or theoretically.

SIWES can be simply defined as a programme established and which is aimed at making a student practically oriented in their respective course of study for labour market and expose them to methods and techniques of handling future occurrence.

1.2 GENERAL OBJECTIVES OF SIWES

Objectives of the Students Industrial Work Experience Scheme include:

1. Provide an avenue for students to acquire industrial skills for experience during their course of study.
2. Expose students to work methods and techniques that may not be available during their course of study.

3. Bridging the gap between theory and practice by providing a platform to apply knowledge learnt in school to real work situations.
4. Enabling the easier and smoother transition from school by equipping students' with better contact for future work placement.
5. Introduce students to real work atmosphere so that they know what they would most likely meet once they graduate.

1.3 IMPORTANCE OF SIWES

All Nigerian students who study technology and science must know about SIWES. Partaking in SIWES has become a prerequisite for the award of diploma and degree certificates in many Nigerian Institutions according to the Nigerian Government Educational policy. Undergraduate students of the following disciplines are expected to be a part of the scheme: Natural sciences, Engineering and Technology, Education, Agriculture, Medical Sciences, Environmental, and pure and applied sciences.

CHAPTER TWO

2.0 HISTORICAL BACKGROUND OF THE ORGANIZATION.

Early Years (1990s-2000s)

1. Founding: Olaoluwa Engineering Construction Works was founded in 1995 by Chief Olaoluwa, a Nigerian engineer and entrepreneur.

2. Initial Operations: The company started as a small construction firm, providing services in building construction, road construction, and other civil engineering projects.

3. Growth: Olaoluwa Engineering Construction Works experienced steady growth in the 2000s, expanding its services to include mechanical and electrical engineering.

Expansion and Diversification

1. Diversification: Olaoluwa Engineering Construction Works diversified its services to include project management, consulting, and training.

2. Expansion: The company expanded its operations to other parts of Nigeria, establishing offices in Lagos, and Abuja FCT.

3. International Partnerships: Olaoluwa Engineering Construction Works formed partnerships with international companies, enhancing its capacity to deliver complex projects.

Modernization and Innovation (2010s-Present)

1. Adoption of Technology: Olaoluwa Engineering Construction Works adopted modern technologies, such as Building Information Modelling (BIM) and Geographic Information Systems (GIS), to improve project delivery.

2. Sustainability: The company emphasized sustainability, incorporating environmentally friendly practices into its operations.

3. Capacity Building: Olaoluwa Engineering Construction Works invested in staff training and development, enhancing its capacity to deliver complex projects.

Olaoluwa Engineering Construction Works has a rich history spanning over three decades. From its humble beginnings to its current status as a leading engineering and construction company, the company has consistently demonstrated its commitment to excellence, innovation, and sustainability.

MISSION AND VISION OF THE ORGANIZATION

Mission

Is to deliver exceptional engineering and construction services that exceed our clients' expectations, while maintaining the highest standards of quality, safety, and sustainability. We are committed to building long-term relationships with our clients, partners, and stakeholders, and to contributing to the development of our communities.

Vision:

Is to be a leading engineering and construction company in Nigeria, recognized for our excellence, innovation, and commitment to sustainability. We aim to be the preferred partner for our clients, and to make a positive impact on the lives of our employees, their families, and the communities we serve.

2.1 DEPARTMENTS AT THE ORGANIZATION

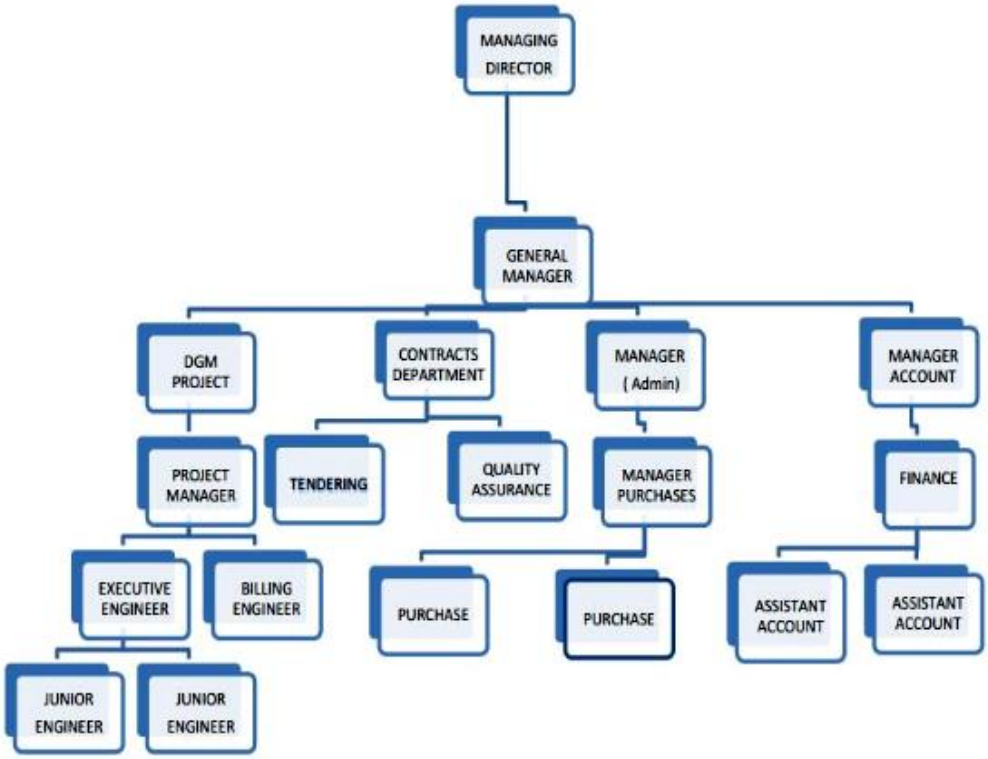
1. Engineering Department - Responsible for designing, planning, and overseeing construction projects.
2. Construction Department - Responsible for executing construction projects, including site management and supervision.
3. Project Management Department - Responsible for planning, coordinating, and controlling construction projects.
4. Procurement Department - Responsible for purchasing materials, equipment, and services for construction projects.
5. Finance Department - Responsible for managing the financial aspects of construction projects, including budgeting, accounting, and financial reporting.

6. Human Resources (HR) Department - Responsible for managing the human resources aspects of the company, including recruitment, training, and employee development.

7. Information and Communication Technology (ICT) Department - Responsible for managing the company's information and communication technology systems, including hardware, software, and networks.

8. Marketing Department - Responsible for promoting the company's services and products, including marketing, advertising, and public relations.

2.2 ORGANOGRAM OF THE ORGANIZATION.



CHAPTER THREE

3.0 INFORMATION ON RELEVANCE TRAINING EXPERIENCE

INTRODUCTION TO SIMPLE WORK TOOLS

Simple work tools are basic equipment and instruments used to perform various tasks and operations in different industries, including construction, manufacturing, and maintenance. These tools are essential for completing tasks efficiently and effectively.

Types of Simple Work Tools

1. Hand Tools: These are portable tools used by hand, such as hammers, screwdrivers, pliers, and wrenches.
2. Power Tools: These are tools powered by electricity, batteries, or compressed air, such as drills, saws, and sanders.
3. Measuring Tools: These are tools used to measure dimensions, angles, and levels, such as tape measures, levels, and calipers.
4. Cutting Tools: These are tools used to cut various materials, such as scissors, knives, and saws.
5. Fastening Tools: These are tools used to fasten or join materials together, such as staplers, nailers, and riveters.

Importance of Simple Work Tools

1. Increased Productivity: Simple work tools help workers complete tasks faster and more efficiently.
2. Improved Accuracy: Measuring tools and other precision instruments ensure accurate measurements and results.
3. Enhanced Safety: Proper use of simple work tools reduces the risk of injury and accidents.
4. Cost-Effective: Simple work tools are often less expensive than complex machinery and equipment.

Examples of Simple Work Tools

1. Hammer: A basic hand tool used for driving nails and fitting parts together.
2. Tape Measure: A flexible ruler used to measure lengths and widths.
3. Pliers: A hand tool used to grip and bend objects.
4. Drill: A power tool used to make holes in various materials.
5. Level: A tool used to ensure surfaces are perfectly horizontal or vertical..

INTRODUCTION TO WELDING PROCESS

Welding is a fabrication process that joins materials, usually metals or thermoplastics, by using high heat to melt the parts together and allowing them to cool, causing fusion. Welding is distinct from lower temperature metal-joining techniques such as brazing and soldering, which do not melt the base metal.

Types of Welding Processes

1. Shielded Metal Arc Welding (SMAW): Also known as "stick" welding, this process uses a consumable electrode covered in flux to protect the arc and molten metal from the atmosphere.
2. Gas Metal Arc Welding (GMAW): Also known as "MIG" welding, this process uses a continuous wire electrode and an inert gas to shield the arc.
3. Gas Tungsten Arc Welding (GTAW): Also known as "TIG" welding, this process uses a non-consumable tungsten electrode and an inert gas to shield the arc.
4. Flux Cored Arc Welding (FCAW): This process uses a special electrode that produces a flux to shield the arc and molten metal.
5. Submerged Arc Welding (SAW): This process uses an electrical arc to melt the metal, and a flux to shield the arc and molten metal.

Welding Process Steps

1. Preparation: Clean and prepare the surfaces to be welded.
2. Assembly: Assemble the parts to be welded.
3. Welding: Apply heat to melt the metal, and allow it to cool and solidify.

4. Inspection: Inspect the weld for defects and quality.

5. Finishing: Finish the weld by grinding, sanding, or painting.

Welding Safety

1. Personal Protective Equipment (PPE): Wear PPE such as helmets, gloves, and safety glasses.

2. Ventilation: Ensure good ventilation to prevent inhalation of fumes.

3. Fire Prevention: Prevent fires by keeping the work area clean and free of flammable materials.

4. Electrical Safety: Ensure electrical safety by using proper wiring and equipment.

Applications of Welding

1. Construction: Welding is used in construction to build bridges, buildings, and other structures.

2. Manufacturing: Welding is used in manufacturing to build machinery, vehicles, and other equipment.

3. Repair and Maintenance: Welding is used to repair and maintain equipment, vehicles, and other machinery.

4. Art and Craft: Welding is used in art and craft to create sculptures, furniture, and other decorative items.

INTRODUCTION TO SIMPLE HAND TOOLS

Simple hand tools are basic, non-powered instruments used to perform various tasks and operations. They are essential for many industries, including construction, manufacturing, and maintenance.

Types of Simple Hand Tools

1. Striking Tools: Used to apply force or drive objects, such as hammers, mallets, and sledges.

2. Cutting Tools: Used to cut or separate materials, such as knives, scissors, and saws.

3. Gripping Tools: Used to grip or hold objects, such as pliers, wrenches, and clamps.

4. Measuring Tools: Used to measure dimensions, angles, and levels, such as tape measures, levels, and calipers.

5. Fastening Tools: Used to fasten or join materials together, such as staplers, nailers, and riveters.

Examples of Simple Hand Tools

1. Hammer: A basic striking tool used for driving nails and fitting parts together.

2. Tape Measure: A flexible measuring tool used to measure lengths and widths.

3. Pliers: A gripping tool used to grip and bend objects.

4. Screwdriver: A fastening tool used to drive screws.

5. Level: A measuring tool used to ensure surfaces are perfectly horizontal or vertical.

Importance of Simple Hand Tools

1. Essential for Many Tasks: Simple hand tools are necessary for many tasks and operations.

2. Convenience: They are often more convenient to use than power tools.

3. Cost-Effective: Simple hand tools are often less expensive than power tools.

4. Safety: They can be safer to use than power tools, especially in confined spaces.

Safety Precautions

1. Proper Use: Use simple hand tools correctly to avoid injury.

2. Maintenance: Regularly maintain simple hand tools to ensure they are in good working condition.

3. Storage: Store simple hand tools properly to avoid damage and injury.

CHAPTER FOUR

4.0 EXPERIENCE GAINED TO STUDENT FIELD

After the SIWES program I gained how to operate in a construction company and a bit experience on how to manage welding engineering in general.

Furthermore, I was introduced to other section of the organization, where I was taught how to engage to different works, such as:

a. I learn about the meaning, features, and its components of a welding machine.

b. I participated in welding some several plate, also cutting of some different dimension plate.

c. I learn about how to make use of gas cutting machine, also participated in how to bend a pipe using Bend machine manually.

d. I watched them and participated in the process of drilling of engine block.

e. I also taught about the different types of maintenance practices for all machine regarding organization.

f. Learning about the process in welding a tank like Kerosine tank or others tanks and also welding of fitting for fitting hole.

g. I was taught about the important of communication on how to relate to customers in a construction company.

4.1. INTERPERSONAL RELATIONSHIP WITH THE ORGANIZATION

During my stay at the **OLAOLUWA ENGINEERING CONSTRUCTION WORKS, KWARA STATE**, I enjoy every bit of it until the last hour of my departure as a SIWES student.

Starting with the Directors, Board-members, and to all the Engineers, and my supervisor showed love and care to me like parent to his daughter.

My cordial relationship with the instructor in my section helps me a lot in the sense that, he never relent in answering my question both theoretical and practical.

CHAPTER FIVE

SUMMARY AND RECOMMENDATIONS

5.0 PROBLEM/CONCLUSION

Even though there was a little hardship especially when the work of the organization is pilled up on me and payment was very meager for transportation.

The SIWES program at the organization give me a wonderful and everlasting experience. The program is readily helped to bridge the gap between theoretical aspect and practical work in the industrial training.

5.1 RECOMMENDATION TO THE ORGANIZATION

Since the SIWES cannot be overemphasized in all aspects in the recent times, I therefore think it is standard enough for any student of Welding and Fabrication Engineering to be giving opportunity after school in this organization to serve and possible employed if he/she deem it.

5.2 SUGGESTION FOR IMPROVEMENT OF THE SCHEME

Base on the experience and knowledge acquired at the course of the SIWES training, I hereby give the following recommendation base on my observations;

- Proper orientation should be given to the students by the Polytechnic before they go on SIWES.
- The placement letter should be given to students early enough so as to avoid attachment in irrelevant organization.
- Institution should ensure that students are attached at relevant establishment for effective training, experience and exposure.
- Government, ITF and the Institution should ensure that students do not pay any amount of money before accepted in any organization. This organization should be sensitized on the objective of SIWES training and the need why they should not collect money before accepting students.