# MUHAMMAD AQIB

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# ACADEMIC EDUCATION

### The University of Lahore (UOL) Bachelor of Science in Mechanical Engineering:

- CGPA: 2.73 / 4.0
- Relevant Coursework: Engineering Drawing, Thermodynamics, Machine Design, Mechanics of Material, Technical Writing, Manufacturing Processes, Heating Ventilating and Air Conditioning, Mechanical Vibrations, Renewable Energy Technology, Mechanics of Machines, Health Safety and Environment, Total Quality Management, Power Plant.
- Maintaining Mechanical equipment, industrial processing systems and tools.

# ACADEMIC PROJECTS

# **Bachelor's Final Year Thesis**

# "Design and Analysis of Bottle Lifting Machine".

- This Project will help in our daily life and will help be able to lift a load of about 294N (bottle) with the help of Lifting Mechanism and gears.
- The assembly will consists of following parts; Lead screw, Metallic Frame, Bevel gear, Bearing, Vapor Motor, Clamp.
- The COMSOL Software we used for Designing prototype.

# **Bachelor's Semester Project**

# "Press Drill Machine."

- The Manufacturing of Press Drill which is drilling of small wooden pieces hole of 0.5 cm.
- The mini Project manufacture in workshop Lab.

# **Bachelor's Semester Project**

# "Mini solar Electric car"

- The photo voltaic (PV) cells that convert sunlight into electricity were used.
- The servo motor was used in a project.

# Bachelor's Semester Project

# "Mini Electric Generator"

- The machine convert mechanical energy into electrical energy.
- The 2.5volts small bulb used.

# WORK AND LEADERSHIP EXPERIENCE

# Bahria Town Rawalpindi

# Mobile crush plant (Supervisor)

- Crush plant working manually and automatically. The main Mobile crushers are track-mounted rock
- Crushing machines that are easily movable on and between production sites.
- Managing manpower according to situations for completing different milestones.
- Solving complex problems through innovative design and practical solutions.



ISB, PK Sep 2016 – Dec 2020

March 2022 - Present

#### **TEREX PEGSON:**

- The main function of crush plant is to make base and sub base material from the mounted rock stone. These material will be used in making of roads. .
- Crush plant capacity of up to (350tph 400tph). And The Fuel Consumption 22 liters/hour depend upon the material.
- Mechanical department: The Repairing of all types of machinery which is used in all the mechanical section.

# Bahria Town Pvt Ltd

#### Mechanical Intern

• Internship at "Engine Section, Hydraulic Section & Machine Shops" in E&P Department Central Workshop.

# **Hydraulic Section:**

# Hydraulic Motor:

- Regular maintenance of hydraulic motors includes checking for leaks, ensuring proper fluid levels, and monitoring for any unusual noises or vibrations.
- Due do any malfunction we go with OEM parts to ensure compatibility and reliability.

# Hydraulic jack:

- We used cylindrical jack because they are used for very heavy loads and can be helpful for larger excavators.
- Ensure the jack has a stable base and is equipped with safety features to prevent accidents. For excavators, stability is crucial to avoid tipping or shifting.

# Hydraulic pump:

- The pump should be able to handle the maximum pressure of the hydraulic system. Common pressure ratings include 2,000 to 5,000 psi (pounds per square inch).
- The Hydraulic pump will be repair due to mechanical Techniques.

# Engine shop:

- Hyundai dismantling of engine to repairing bore size and then adjusting of new piston and ring or cylinder head, cylinder block, also at the end all the gasket will be new.
- Komatsu dismantling of engine to stop the leakage .all the gasket will be change to displace the new gaskets.
- Hyundai Boring and Honing: Enlarging and smoothing cylinder bores for better performance. Grinding: Refacing and smoothing crankshafts, camshafts, and other critical components.
- Boring and Honing: Enlarging and smoothing cylinder bores to fit new pistons.
- Grinding: Refacing crankshafts, camshafts, and other parts for proper alignment

# **Machine Shop**

- Precision Measuring: Turning: Using a lathe to rotate a workpiece while cutting tools shape it. Ideal for producing cylindrical parts.
- Milling: Using a milling machine to remove material from a workpiece using rotating cutters. Suitable for creating complex shapes.
- Component Repair: Fixing damaged or worn parts, such as engine components, machine tools.
- Developed designs for railways in a design and drawing office and performed various lathe machining processes, including turning, facing, grooving, parting, threading, knurling, drilling, reaming, and boring.

#### Sep 2018 – Oct 2018

#### D.G.Khan Cement Company Pvt Ltd

#### **Mechanical Intern**

DG Khan Cement Company Ltd, (Khairpur Plant), Chakwal, Pakistan

Query Department, Crusher Area, Raw Material Storage Yard, Packing Plant, At D.G.KHAN CEMENT COMPANY Ltd.

- **Query Department**: It is a first procedure in blasting of mountain which the mounted rock form .and these Mounted rock will be used in different process which further cement
- **Raw Material storage yard**: The material which is used in production cement manufactures quarry raw materials including limestone, clay and sand is store in yard department.
- **Packing Plant**: It is a kind of cement equipment that is necessary for the production of bagged cement it is mainly used to complete the automatic packing of cement.
- Crusher area: An Area in which large amount of Mounted rock is disported in small amount of size which is used in other areas.

# **Bill Pakistan Pvt Ltd**

Internee

July 2017 –September 2017

BIL Pakistan (Pvt.) Ltd Islamabad Internship at "Machine assembling, Maintenance"

#### **Machine Assembling**

- Learning the assembly process of various industrial machines. Exposure to tools and equipment used for assembling components, such as mechanical parts, Electrical systems, and hydraulic systems.
- Understanding and following technical drawings, schematics, and blueprints for accurate Assembly.

# **Maintenance Practices:**

- Learning preventive maintenance techniques to keep machines running efficiently and avoid unexpected breakdowns.
- Involvement in troubleshooting, diagnosing issues, and repairing machinery.
- Hands-on experience with different maintenance tools, techniques, and safety protocols.
- Exposure to maintenance scheduling, condition monitoring, and predictive maintenance Methods.

# **SKILLS & COMPETENCIES**

**Design/Simulation:** PTC CREO Parametric, SolidWorks, E20 Excel Sheet, Comsol **Others:** SAP, MS Office, Photoshop **Language Proficiency:** English, Urdu