

TALHA HASSAN KHAN

MS. CHEMICAL ENGINEERING (PEC REGISTERED) - RESEARCHER

Highly articulate and professional educator and chemical engineer with expertise in developing, teaching, and communicate complex chemical engineering problems and concepts. Proven-record of creating individual student-based tuition programs, implementing procedures to provide necessary understanding of subjects. Possess the ability to design and implement effective education models, as well as lead and motivate the team in a structured manner.



+92 335 2645418 / +92 331 8663260 - talhahassan_16@hotmail.com - Karachi, PK- <http://bit.ly/2qSoVet>

AREAS OF EXPERTISE

HEALTH AND SAFETY

PETROLEUM AND REFINING

PROCESS CONTROL

ANALYTICAL CHEMISTRY

PROFESSIONAL QUALIFICATIONS

- **MASTERS IN CHEMICAL ENGINEERING** 2022
NED University of Engineering and Technology, Pakistan
Overall CGPA: 3.48/4
Core Subjects:
 - Advanced Heat transfer
 - Advanced Thermodynamics
 - Advanced Chemical reaction Engineering
 - Transfer phenomenon
- **BACHELORS IN CHEMICAL ENGINEERING** 2016
NED University of Engineering and Technology, Pakistan
Final Year Research Project: (Journal Publication in-process)
 - Fabrication of cost-effective novel chemo-sensor PVC-embedded membrane strips for the detection of metal ions in aqueous solutions using ionophores as chelating agent.

PROFESSIONAL CERTIFICATIONS AND ACHEIVEMENTS

- **CERTIFIED INTERNAL AUDITOR OF "INTEGRATED MANAGEMENT SYSTEM (IMS)".**
ISO 9001: 2015; ISO 14001: 2015; OSHAS 18001: 2007
- **CERTIFIED PROCESS SAFETY MANAGEMENT IMPLEMENTER**
SUSTAINABLE BUSINESS SOLUTIONS (2019)
- **DEVELOPED ENVIRONMENTAL RISK ASSESSMENT PLAN FOR ENTIRE REFINERY.**
NATIONAL REFINERY LIMITED

PROFESSIONAL EXPERIENCE

○ **PROCESS ENGINEER**

2017-Present

Lube Refinery Unit, National Refinery Limited, Pakistan

- Boosted the day-to-day operational process for to meet production demand of lube refinery.
- Monitor control panels unit's process performance continuously using the distributed control system (DCS)
- Operating control panel (DCS) equipment at NRL during the assigned shift & Area unit acting as a panel controller and team members
- Successfully able to meet the bottle-necking situations in the plant due to high demand of hydrogen
- Review of engineering documentation including PFDs, P&IDs, interlocks design specifications, HMI, designs and equipment data sheets.
- Review laboratory sample results analysis by referring to laboratory information management system.
- Outpaced all the internal and external targets of process scheduling and manpower management.
- Evaluated the commission activities during production scheduling on regular basis.
- Control start-up, shutdown and emergencies by alternations of speed, temperature, pressure and flow rates as necessary
- Initiates operational adjustments to ensure optimization of process performance and improves high-value product yield; in order to ensure units to ensure products meet the required specification and plant operates in a safe manner
- Carry out maintenance activities of instrument and on-plant equipment (i.e., both predictive and preventive).

Methyl Ethyl Ketone (MEK) Unit, Lube Refinery - National Refinery Limited

- Extraction & Removal of paraffin waxes from Lube oils using MEK-Toluene as a solvent mixture to improve Pour points.
- Acquired knowledge regarding Propane Refrigeration System, Rotary Filters operation, Solvent Recovery system.

Hydrogen Production and Hydro Finishing Unit, Lube Refinery - National Refinery Limited

- Production of Hydrogen gas by Steam Methane process and then reaction of H₂ with Lube oils to remove Sulfur by producing H₂S gas to improve Color of Lube oil.
- Acquired knowledge regarding Reformer (Temperatures about 910°C), Compressors, Reactor and CO₂ Absorption system using MEA.

Benzene-Toluene-Xylene (BTX) Plant: Lube Refinery - National Refinery Limited

- Separation of Benzene, Toluene, Xylene & Heavy Aromatics from Reformate by Fractional Distillation (Shell Sulfolane Method)
- Experienced the major Startup, Operation and Trouble shootings of the plant

○ **HEALTH AND SAFETY ENGINEER**

Health and Safety Department, National Refinery Limited, Pakistan

- Implement and monitor work permits and PPE's practice in refinery.
- Assess the operations as per critical HSE view and rectify the issues to avoid incidents and accidents.
- Implement HSE practice as per international quality standards, such as Risk Assessment Approach, OSHAS, and ISO.

○ **CHEMISTRY TEACHER**

(2013-2015)

National Coaching Center, Karachi, Pakistan.

- Served three years as a Chemistry Teacher for S.S.C. part 1.
- Working alongside my colleagues to provide consistent education for all students.
- Regularly performing experiments and teaching students how to replicate the experiments under safe conditions.
- Writing and marking examination papers.
- Marking homework, quizzes and tests weekly.
- Educating students on the health and safety regulations in a lab.
- Liaising with school administrators on matters of concern.
- Contributing to extra-curricular activities in the department.
- Organizing and delivering training sessions.
- Reporting to superiors and the Head of Sciences on any concerns I have about students

CORE STRENGTHS

AS TEACHER

- Elementary Education
- Classroom management
- Student Engagement
- Behavior Management
- High Impact lesson planning
- Conflict Resolution
- Project Planning

AS AN ENGINEER

- ASPEN HYSYS, MS Office Suite
- Technical and Report Writing
- Leadership and Workforce Management
- Conflict Resolution
- SOP Interpretation
- Process management
- Risk assessment and mitigation

REFERENCE

- **Dr. Saeeda Nadir Ali (HEC Approved Supervisor)**
Associate Professor at NEDUET: (saeeda@neduet.edu.pk): +92 333-7208120