

**Wael Hassan Mohamed Mowena**  
R&D QC Lab Section Head | Product Quality Specialist | QHSE Lead | Lead Auditor  
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**PERSONAL PROFILE:**

Driving sustainable Quality in Oil and Energy Industry! Transforming Refinery Performance through Precision Science, Integrated Systems, and Data Intelligence. Vision-driven Petroleum Quality Executive, Experienced R&D QC Lab Senior Chemist with 12+ years' proven expertise in Oil Refining Industry. Dedicated to advancing Downstream performance, Hydrocarbon analysis, Refinery process optimization, Petroleum product qualification, Integrated Management Systems (ISO 9001/14001/45001/50001), and ISO 17025 Accreditations. Proven ability to enhance product yields through ASTM/IP/UOP/EN/ISO-Compliant QA/QC frameworks and advanced Data-driven process optimization to elevate yield, quality, and sustainability across downstream operations. Certified NEBOSH Process Safety Management leveraging methodologies for risk-mitigated and profit-maximizing outcomes, with demonstrated success in leading EGPC LIMS, SAP/ERP Implementation.

I deliver beyond targets by merging a detail-oriented, results-focused mindset with strategic leadership agility. My approach balances profit optimization with unwavering commitment to safety, quality, and sustainability, turning organizational vision into measurable reality. Aim To drive transformative impact as an influential leader in oil & energy, applying my multidisciplinary expertise, influential collaboration skills, and passion for frontier innovation. I seek roles where pioneering solutions redefine industry benchmarks.

**PROFESSIONAL EXPERIENCE:**

April 2013. R&D QC Lab. Section Head at Alexandria Petroleum Company "APC" till Present.

- ♦ **Field:** Quality Control.
- ♦ **Department:** Chemical; Research and Development Laboratories.

**My responsibility is:**

My core responsibility is to maintain On-spec. product quality meeting related standard specifications. This would entail diverse activities within my current role including:

- ♦ Demonstrated expertise in petroleum chemistry with comprehensive command of Chemical Profiling and Physical Properties analysis for crude oil, refined petroleum products, and hydrocarbon fuels.
- ♦ Conduct comprehensive crude oil assays to identify high-value distillation pathways, maximizing refinery profitability and yield efficiency.
- ♦ Ensure daily on-spec monitoring and quality controlling of crude oil, petroleum distillates, Automotive, Aviation, and Marine fuels, and final products, Interpret analyses results against stringent International Standards "ASTM, IP, EN, UOP, ISO", and Egyptian General Petroleum Corporation "EGPC", and market-driven Specifications.
- ♦ Implement dynamic product quality monitoring systems, leverage real-time data to drive operational adjustments, ensuring continuous on-spec production, optimal yields, and peak process efficiency.
- ♦ Guarantee the absolute integrity, accuracy, and timely reporting of all analytical data generated within the Lab.
- ♦ Analyze complex datasets to identify trends, diagnose root causes of operational upsets, and provide actionable technical recommendations to Operations, Engineering, and Management.
- ♦ Spearhead the development, acquisition, and implementation of cutting-edge QC tools, techniques, and methodologies. Lead technical studies, research, and product/blend trials assessments to enhance conformity and production performance, and to provide guidance on future directions. Ensure reliable data supports research studies and process decisions.
- ♦ Oversee the end-to-end lifecycle of laboratory equipment (Tendering, Installation, Site Acceptance Test "SAT", Verification, Calibration, Standardization, and troubleshooting), ensuring compliance with Standard Operating Procedures "SOPs", manufacturer guidelines, and accredited quality management systems ISO 9001:2015 and ISO/IEC 17025:2017.
- ♦ Optimize Lab resources and workflows utilizing 5S Methodology, driving Lean laboratory operations, operational hygiene, efficiency, and safety within the laboratory environment.
- ♦ Develop, implement, and audit robust risk control measures and Safe Operating Procedures within the laboratory and its joint activities.
- ♦ Resource Management: Participate in preparing yearly OPEX/CAPEX budgets and control expenditure.
- ♦ Lead cross-functional technical assessments, committees, and Techno-Economic studies (e.g. Performance Test Run, Crude Oil Assays) per unit operations, targeting maximized refinery efficiency, yield improvement, value addition, energy conservation, and overall unit performance.
- ♦ Develop and deliver technical training programs, and foster knowledge sharing across laboratory divisions to elevate team competency.

- ◆ Integrated Management System “IMS” Champion, Team Lead for implementing and sustaining QHSE Integrated MS (ISO 9001:2015, 14001:2015, 45001:2018). Develop performance KPIs, conduct internal audits, and ensure sustainable IMS across all refinery sectors.
- ◆ Serve as ISO/IEC 17025:2017 Technical Operations Manager, ensuring accredited Lab compliance with Standard accreditation body “EGAC” requirements. Review and approve quality policies, procedures, documented information, and manage quality audits to uphold standards and relevant regulations.
- ◆ Function as LIMS Project Coordinator per EGPC affiliated companies, LIMS Administrator, and SAP/ERP S/4 HANA QM Module Key User, enabling seamless end-to-end business integration for quality data flow.
- ◆ As Certified NEBOSH PSM, actively participate in Process Safety Management Activities: Asset Integrity Gap Analysis, HAZID, Bow-Tie Analysis, and Environmental Assessments. Serve as CCPS Process Safety “Incident Investigation” active team member, structuring Incident Investigation Management guideline.

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September 2023. QC Lab. Chemist at ADNOC Refining “Ruwais Refinery RR-III” till August 2024.

- ◆ **Field:** Research Centre & Quality Control Division.
- ◆ **Department:** Quality Control & Laboratory Department.

**My responsibility was:**

My core responsibility was a senior role with both technical and leadership dimensions, including:

- ◆ Conduct routine and non-routine quantitative/qualitative tests on oil, process streams, final products, fuels, water, and HSE samples, ensuring all testing follows internationally accepted standard methods.
- ◆ Refinery Water Chemistry: Ensure the laboratory functions as a mission-critical asset protection center, providing real-time, high-fidelity data essential for safeguarding refinery infrastructure, optimizing water utilization, ensuring regulatory compliance, and guaranteeing product quality.
- ◆ Monitor the comprehensive operation, analytical integrity, timely reporting, and continuous improvement of the Central Water Laboratory, serving as the primary analytical hub for all refinery water systems across Utility, Process, and Effluent networks.
- ◆ Rigorously manage sophisticated analytical surveillance programs for diverse and complex water systems serving major refinery process areas including Hydroskimmer, Hydrocracker, Green Diesel, Unleaded Gasoline & Low Sulfur Gas Oil, Condensate Distillation, Lube Base Oil, Off-Site & Oil Movement, and Refinery Utility. Utilizing Statistical Process Control and data trending to proactively monitor and identify deviations and predict potential corrosion, scaling, poisoning, or fouling events before operational impact.
- ◆ Serve as the principal Chemist providing analytical expertise and oversight for the entire General Utility Plant “GUP” Complex, ensuring optimal performance and reliability of Desalination Plant (Feed Seawater, Pretreatment process, MSF Analysis, Drinking water purity, and Brine quality). Auxiliaries Plant (Cooling Tower, Condensates, and Demin Plant). Power Plant (Boiler Feedwater, Blowdown control, Steam purity, and Condensate return). CO<sub>2</sub> Plant (Soda Tower, KMNO<sub>4</sub> Tower, and MEA Tower & Boiler), and Acid Cleaning Hypochlorite Plant.
- ◆ Precise Monitoring and interpretation of key water/steam cycle parameters specific to Waste Heat Recovery Project “WHRP” Units including Boiler Feedwater & Steam Purity, Condensate Quality, Cooling Water Chemistry, and Blowdown Control, safeguarding thermodynamic efficiency.
- ◆ Critical Water Analyses Proficiency: Corrosion Accelerators (Chloride, Sulfate), Scales Formation (Silica), Organic Load Indicators (TOC, COD, BOD), Corrosion Control Parameters (pH, Alkalinity, Acidity), Fouling Predictors (Turbidity), Corrosion Byproduct Indicators Trace Metals (Fe, Cu, Mn, etc.), Conductivity, Hardness, Dissolved Oxygen, Corrosion Inhibitors, Nitrites, H<sub>2</sub>S, Ammonia, Phosphate, Oil Content, TDS, TBC, Chlorine, Salinity, Amine Treatment (MDEA), Oxygen Scavenger (DEHA), and so forth.
- ◆ Demonstrated collaborative leadership as a key technical contributor in achieving ISO 17025:2017 accreditation for an extensive scope of chemical and physical testing protocols critical to refinery operations.
- ◆ Champion a culture of excellence and continuous learning by delivering structured, weekly coaching sessions for laboratory staff. Focus areas included Advanced Analytical techniques, Refinery-Specific process chemistry interactions, and Process & Laboratory Safety Mastery.
- ◆ Conduct thorough, documented Risk Assessments ensuring compliance with ADNOC 100% HSE Values, specifically for: Compressed Gas Cylinder Storage & Handling Facility (Assessing Risks related to storage integrity, segregation, handling procedures, leak detection, emergency response, and personal training). Chemical Storage Areas (Evaluating inventory control, secondary containment, fire risks, and spill mitigation), and High-Hazard Laboratory Procedures.

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September 2008. Senior Chemist Technical & Commercial Executive at TRANSOCEAN Coatings till April 2013.

- ◆ **Field:** Protective – Industrial and Marine Coatings.
- ◆ **Department:** Marketing and Sales, R&D, Technical Services and Coating Inspection.

**My responsibility was:**

Five years of progressive responsibility at Transocean Coatings (SIPES Member) integrating roles as Technical Advisor, R&D Specialist, Protective Coatings Inspector, and Marketing & Sales Executive, my job duties included:

- ◆ Develop and execute market-entry strategies for both industrial and marine protective coatings across Egypt and North Africa (Libya, Tunisia, and Morocco), driving regional revenue growth and market penetration.
- ◆ Deliver end-to-end technical support for clients, resolving complex complaints, and composing Technical-Commercial proposals to secure projects.
- ◆ Coordinate technical seminars, workshops, and industry events to expand client networks.
- ◆ Spearhead market-driven R&D initiatives by conducting competitive-product analyses, identifying market gaps, and delivering technical specifications to guide development of next-generation coatings.
- ◆ Design and supervise field trials of new coatings under diverse environmental conditions (mild to severe), ensuring performance alignment with client requirements.
- ◆ Develop comprehensive Inspection Test Plans “ITPs” and QA/QC procedures for coating application, surface preparation, and in-process validation across Marine-Industrial Assets.
- ◆ Develop corrosion-protection system specifications for high-stakes projects, selecting optimal coatings based on technical feasibility, durability, and cost-effectiveness.
- ◆ Direct cross-functional teams in coating system deployment – from site surveys and material logistics to application supervision – ensuring on-schedule, compliant, and zero-defect project delivery.
- ◆ Mitigate project risks through proactive conflict resolution, strict adherence to HSE Standards, loss-prevention strategies, and streamlined workflows, to enhance service quality, productivity, and customer satisfaction metrics.

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April 2007. QC Lab. R&D Chemist at Alexandria Fiber Company S.A.E. till September 2008.

A multinational petrochemical company within the Aditya Birla Group operates the Middle East and Africa's first acrylic fiber manufacturing plant, utilizing advanced EXLAN technology from Japan.

- ◆ **Field:** Quality Control.
- ◆ **Department:** Chemical; Research and Development Laboratories.

**My responsibility was:**

- ◆ Direct end-to-end quality control for Acrylic Fiber production across polymerization, dope making, solvent recovery, and utility operations.
- ◆ Validate raw materials, in-process monitoring, and final product QA through rigorous testing protocols.
- ◆ Spearhead dye R&D, evaluate chemical quality, develop custom color formulations for clients, and execute shade transition monitoring on production lines.
- ◆ Address customer-specific color development requests.
- ◆ Optimize product performance via comprehensive post-dye testing (rubbing, light/wash fastness,  $\Delta E$ ) using various key equipment (Hunter lab UltraScanPRO, Ahiba Nuance Top Speed II, Mesdan Lab Solar Box 1500, UV-Vis Spectrophotometer Shimadzo/Perkin Elmer, and so forth).
- ◆ Engineered Lab efficiency through installation, calibration, and standardization of analytical devices.
- ◆ Implement 5S Methodology across R&D/QC Labs, enhancing safety and organization.

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December 2006. Chemist at COPALIN Chemical Industries S.A.E till April 2007.

- ◆ **Field:** Protective – Industrial and Marine Coatings.
- ◆ **Department:** Marketing and Sales, R&D, Technical Services and Coating Inspection.

**My responsibility was:**

As an entry-level developmental role, my job duties included:

- ◆ Support marketing and sales initiatives for industrial and marine protective coatings, gaining foundational product and market knowledge.
- ◆ Assist the R&D and Technical Services Teams, contributing to product development and performance.
- ◆ Perform coating inspections to verify application quality and compliance with project specifications.

## EDUCATION | CERTIFICATIONS | COURSES:

### EDUCATION:

2002-2006

University of Alexandria, Faculty of SCIENCE,  
Chemistry-Biochemistry Department

### CERTIFICATIONS:

- ◆ Certified Process Engineers Diploma – Oil & Gas Skills (OGS) and The Northern Alberta Institute of Technology (NAIT), Petroleum Complex – Alexandria [2012 – 2013] includes the following Modules: Oil & Gas Exploration, Drilling, Production and Surface Facilities; Oil Refining Technology; Natural Gas Processing Technology; Rotary Equipment, Operation, Selection and Control; Automation Systems for Process Staff “Advanced Courses”; and Advanced Process and Sequential Control “Strategies Analysis & Troubleshooting Program”.

- ◆ NEBOSH HSE Certificate in Process Safety Management “PSM” – NEBOSH, [2023].
- ◆ Requirements of ISO/IEC 17025:2017 – Oil & Gas Skills (OGS), [2018].
- ◆ Internal Audit: ISO/IEC 17025:2017 – Oil & Gas Skills (OGS), [2020].
- ◆ Training Of Trainers (TOT) Preparation – Alexandria Petroleum Company (APC), [2025].
- ◆ Six Sigma Yellow Belt Professional – 6sigmastudy, [2020].
- ◆ ISO 50001:2018 “Energy Management Systems – Requirements with guidance for use” – Egyptian Syndicate of Scientific Professions – Alexandria, [2019].
- ◆ Process Simulation using Aspen HYSYS (30H) – Egyptian Company for Engineering Training (EGYCET) Alexandria, accredited by Egyptian Engineers Syndicate, [2019].
- ◆ Internal Auditors Qualifying in accordance with OHSAS 18001 Specification – Petroleum Safety & Environmental Services Co. (PETROSAFE), [2015].
- ◆ OSHA 30H Training Course in Occupational Safety and Health Standards for General Industry and Construction, [2012].
- ◆ NASP Basic Safety Diploma in Workplace Occupational Safety and Health – The National Association of Safety Professionals (NASP), [2012].
- ◆ Level 2 Award in Health and Safety in the Workplace – Chartered Institute of Environmental Health (CIEH), [2013].

#### COURSES | PROGRAMS:

- ◆ Refinery Pilot Plant Training program – Alexandria Petroleum Company (APC), [2013].
- ◆ Laboratory Information Management System (LIMS) Administrator – Labware Arabia, [2020].
- ◆ Sustainability Fundamentals Process Modeling for Carbon Capture and Hydrogen Production – Aspen Technology (AspenTech), [2025].
- ◆ Generative AI Overview for Project Managers – Project Management Institute (PMI), [2023].
- ◆ Potential Project Manager “Project Management Professional” – Egyptian Petroleum Research Institute (EPRI), [2020].
- ◆ McKinsey Forward Program, Core areas include Adaptability and Resilience; Problem Solving; Communicating for Impact; Relationships and Well-Being; and Digital Toolkit Courses – McKinsey & Company, [2025].
- ◆ BP Skills Refinery, Core areas include Critical Problem Solving; Cognitive Flexibility; Emotional Intelligence; Communicating with Influence; and Innovation – BP, [2020].
- ◆ Process Safety Management “PSM” implementation workshop – Petroleum Safety & Environmental Services Co. (PETROSAFE), [2022].
- ◆ Risk Management – International Institute of Risk & Safety Management (IIRSM), [2023].
- ◆ Incident Investigation – International Institute of Risk & Safety Management (IIRSM), [2022].
- ◆ Life-Saving Rules “E-Learning” – ADNOC, [2023].
- ◆ Integrated Management Systems (IMS) – ADNOC, [2023].
- ◆ Introduction to Artificial Intelligence (AI) – ADNOC, [2023].
- ◆ QHSE Management System Awareness and Auditing Training Course – Petroleum Safety & Environmental Services Co. (PETROSAFE), [2023].
- ◆ Safety Data Visualization Using Excel – Create Interactive Dashboard Using Excel Virtual Course – INFINITE HSE Virtual Learning Online Platform, [2023].
- ◆ Hazard Identification & Risk Assessment – Petroleum Safety & Environmental Services Co. (PETROSAFE), [2020].
- ◆ Safety and Environmental Management Systems, Emergency Response and Crisis Management – Petroleum Safety & Environmental Services Co. (PETROSAFE), [2021].
- ◆ Fundamentals of Safe Conduct, Incident Investigation and Reporting – Petroleum Safety & Environmental Services Co. (PETROSAFE), [2021].
- ◆ Petrochemicals Industry Technology Program – Egyptian Petrochemical Company (EPC), [2017].
- ◆ Time Management, Distinction: A – Notting Hill College (Business School), [2013].
- ◆ English Program Level 11, 12 – Academy Company for Information and Communication Technology (ACICT) – Arab Academy for Science, Technology & Maritime Transport (AASTMT), [2020].
- ◆ V-TIC Selling Technique – MBA Egypt (Master Business Academy), [2012].
- ◆ Marketing Studies and Research Preparation – Leadership Development Center of Business Administration, [2009].

#### SKILLS:

- ◆ Leadership and Interpersonal Competencies: Cross-Functional Collaboration and Trust-Building; Conflict Resolution and Change Management; Decision-Making and Accountability; Active Listening, Empathy, and Influential Communication; Integrity, Commitment, and Mindset Flexibility; Creativity, Positivity, and Dedication.
- ◆ Operational Excellence, Critical Thinking, Data Synthesis, and Structured Problem-Solving and Hypothesis-Driven Solutions.

- ◆ Analytical Reasoning, SMART Framework, and Cognitive Flexibility.
- ◆ Data Analysis, Agile Methodology, Design Thinking, and Technology Adoption.
- ◆ Adaptability, Resilience, Experimentation, and Continuous Learning Agility.
- ◆ Performance Management, Tracking, and Innovative Solutions.
- ◆ Emotional Intelligence, Social Responsibility, and Ethical Persuasion.

#### LANGUAGES:

- ◆ Arabic: Native Speaker.
- ◆ English: Fluent (Verbal and Written Communication, Professional Conversation).

#### PERSONAL DETAILS:

- ◆ Date of Birth: November 28, 1984.
- ◆ Nationality: Egyptian.
- ◆ Marital Status: Married.
- ◆ Military Service: Exempted.