



Dr. Mohamed Ahmed Khalil

Past Consultant of Corrosion Engineering and Corrosion Control in Raslanuf Oil and Gas Processing Company

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EDUCATION: EDUCATION:

- Ph.D. Materials Science and Engineering from Alexandria University (Egypt) 2009
- M.Sc. Corrosion Science & Engineering, UMIST (UK), 1998
- B.Sc. Science, Tripoli University (Libya) 1988
- BA. Specializing in Arabic Language and Islamic Studies, Tripoli open University (Libya) , 1990

CAREER PROFILE:

- 34 years experience, in both oil gas and petrochemical industries; in the field of corrosion engineering, and corrosion control methods, such as: protective coating (PC), material selection (MS), cathodic protection CP, corrosion inhibitors (CI), and corrosion monitoring (CM), Dealing with all Electrochemical, Test Methods: e.g. potentiodynamic, polarization (PD), electrochemical impedance spectroscopy (EIS); weight loss coupons (WLC), Electrical resistance probe(ER), and linear polarization resistance, (LPR) probes. Responsible of all CP system types, such as sacrificial anode (SA CP) and impressed current (ICCP) at different plants i.e. utilities, refinery, ethylene and polyethylene cathodically protected structures. Dealing with internal and external CP structures: coated pipelines / large diameter cement lines, under / above ground storage tanks (UST)/ (AST), desalination and steam power generation water boxes , as well as submersed structures i.e. offshore, and seawater intake structures (harbor steel piles platforms, rack bar/ band screens, main pumps, gates ,ladders , tag boats, launch, crane barrage and CP/ PC balance tanks
- 1990 to 1991 - Corrosion Engineer – **Zueitina oil and gas processing company**, mainly in CP, Corrosion inhibitor Monitoring and NDT (UT.THK.) ,follow-up the upgrading/ installation of ASTs CP monitoring during Bottom plates, replacement and installation of an ICCP system for the new constructed jetty, inspection of underground-excavated pipelines, based on the intelligent pig wall- thickness measurements

POSITION

- 1991 up to 2023 -**Raslanuf oil and gas processing company**, as CP unit supervisor, Corrosion Control Group supervisor:[Cathodic protection(CP), corrosion monitoring (CM), corrosion inhibitor(CI) and protective coating (PC)], Corrosion Engineering Division Head, Corrosion Engineering specialist, Chief of Corrosion engineers Specialists, and Corrosion Engineering consultant , as an acting inspection and corrosion engineering superintendent, as well as a Technical services acting manager .

RESPONSIBILITY

- Experienced in operating, monitoring, different T/R units troubleshooting or both Manual and/ automatic potential controller T/R units, follow up the maintenance of cathodic protection system equipment such as: Transformer-Rectifiers (T/R units) Anode ground beds (anode retrieving or installation), Responsible for CP team for conducting yearly potential survey on all Rasco complex different cathodically protected structures, and preparing a comprehensive technical reports
- Technical team group leader of Rasco harbor GACP system inspection and maintenance project
- Deep Well Grounded Magnetite Anode Chains Retrieval and Installation for Raslanuf Complex impressed Current Cathodic Protection System Rectification
- Conducted a lot of corrosion Failure analysis on different environments, structures and materials (AST, Desalination plants, pipelines, heat exchangers... est.)
- Preparing the scope of work of Raslanuf harbor steel piles (1348 piles and 2613 no's of sacrificial anodes) underwater inspection and evaluation of piles coating, sea debris and GACP component.

- Conducted a lot of (ICCP/GACP) system surveys on different underground, ASTs, and submersed structures
- Preparing of CP, CM/CI technical scope of works and evaluation of tenders introduced technical offers
- Experience in Chemical corrosion inhibitor selection and evaluation for close circuit cooling water (TCW I &II) and firefighting systems at Rasco complex (Refinery, Ethylene, Polyethylene and utility plants)
- Supervisions of underwater inspection team and survey on GA cathodically protected (Raslanuf harbor) submersed steel piles
- Conducting complete survey on seawater intake submersed structures (different sizes and type of pumps, screens, gait, ...) ICCP system
- 2021 as a CPPE company Corrosion engineering consultant for Supervision of Field CP Engineers activities on 'Replacement project for Tank no.1 & Tank no.17 at Esider Tank Farm.
- Participated in several turnarounds of Refinery, Ethylene and polyethylene plants inspection of Pressurized vessels/drum towers, heat exchangers, reactors, heaters, flares; aboveground storage tanks(ASTs), pipelines...etc.
- 2022 supervision of Rasco complex firefighting system chemical treatment trial test technical team and submission of comprehensive technical report
- Research Scientist with over 24 years, corrosion failure analysis of USTs/ASTs, pipelines, desalination Plants and stray current corrosion problems
- Performed a long term Researchers in the field of splash zone CP
- Participated by over 70 technical papers and presentation at local and **international conferences/seminars** at universities/companies and industries, published in high stander international journals such as NACE, Materials science and engineering and ICF.

UNIVERSITIES/ACADEMIA:

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- Lecture in faculties of science, high institutes and engineering's (physics, chemical/petrochemical Engineering, and metallurgy and material science in deferent subjects such as: General physics, materials science, ceramic, composite material, physical metallurgy and corrosion/corrosion control at Sirt, Bright star and Ajdabia universities (2009-2019).
 - Supervision and external examiner of undergraduate student projects, the undergraduate projects covered different corrosion/corrosion control subjects for petroleum, chemical, petrochemical, and metallurgical engineering.

TRAINING EXPERIENCE

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- Experienced in training courses in corrosion basics, cathodic protection/principles and advanced Courses and corrosion control by protective coatings (2001-2018) Raslanuf training Center department.
 - Instructor in corrosion and corrosion control curses for technician and engineers

MEMBERSHIPS:

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- Past Member of NACE
 - Member of Libyan corrosion society
 - Forgoing Member of Egyptian corrosion societies
 - Industrial member of TWI institute
 - Managing Safety and holding an iosh certificate
 - Member of Raslanuf representative teams to discuss some bended Technical problems with Ansaldo company at Italy, Sinit Company at Turkish , and TWI at UK.
 - As a Member of technical committee of CBM 2114 corrosion Conference