Haider

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# EDUCATION

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**niversity of Engineering & Technology** Peshawar, Pakistan

**Bachelor of Science in Engineering** June 2013

**Major: Mechanical Engineering**

# CERTIFICATION

## API 570 Piping Inspector *July 31, 2016 – July 31, 2019*

Certification Number 66843

# PROFESSIONAL EXPERIENCE

## Maintenance and QA/QC Engineer *August 2013 – November 2016*

**Medizan Labs** *Lahore, Pakistan*

* Was responsible for periodic basic inspection of process and utility piping using inspection instruments (Cam Bridge gauges, Hi-Lo gauge, Fillet Weld gauge, mirrors), checking for discontinuities, indications, and corrosion at select CMLs, and to relay this information to supervisor in case of non-conformities and serious indications
  + Visual Inspection
  + Pre and post Alteration Inspection
  + Radiographic Film Review for thickness monitoring of high-temperature piping
  + UT thickness measurement for thickness monitoring of ambient temperature piping
  + MT and PT for in-service piping
* Oversaw installation and erection of new pipeline and piping spools; inspected alignment, fittings, valves, joints, pre-heating, hydrostatic leak testing, and PWHT (where required) of newly installed piping
* Performed inspection of piping flanges and flanged fittings, bolts, gaskets, and adherence to design standards & recommendations described in ASME B16.5
* Developed inspection, NDT, maintenance, and alteration plan for initial erection and installment of purified water plants & associated piping network, heat exchangers, centrifugal pumps and associated piping network, pipe fittings, initial testing, and subsequent periodic inspection
* Performed and executed Inspection and Testing Plan for Chemical Reactor in Organic Synthesis Process plant
* Oversaw and supervised the installation and fitting of utility service piping with centrifugal suction pumps (both positive and negative suction), ensuring correct reducers, piping spools, fittings, taps, an alignment were used according to specified standards of pump manufacturer
* Performed inspection of underground utility piping through soil resistivity measurement techniques using Wenner Four-pin Method
* Inspected internal corrosion in Heat Exchanger piping and controlled it using corrosion inhibitor and water sample analysis for fouling
* Inspected and maintained external corrosion records using Impressed Current Cathodic Protection and sacrificial anode on specific underground and submerged piping networks
* Reviewed MRIR and developed Non-conformance of Materials Report when required
* Developed I&TP based on preventive and RBI techniques in compliance with API 580; thoroughly documented all inspection procedures and findings carried out in inspection reports for separate piping circuits
* Was responsible for the procurement of HVAC machinery using estimates through MJ8 standard load calculation of factory and facilities
* Performed periodic inspection of refrigerant lines and chillers
  + Checking approach temperatures of chillers to observe the efficiency of performance
  + Inspection of condenser tubes and supervision of their cleaning, replacement (when required) to ensure no instance of fouling
  + Inspecting purge units to ensure no non-condensables can enter the evaporators
  + Reviewing daily logs to ensure optimum performance by reviewing temperatures, pressures, fluid levels, and flow rates
  + Analyzing compressor oil and inspection of oil quality through third-party spectrometry results
* Performed visual and basic NDT (UT, MT, PT) inspection of utility piping (Water, Nitrogen, and Natural Gas lines) to and from condensers, heat exchangers, and other process equipment in HVAC units

## Internship *June 2012 – September 2012*

**Khyber Teaching Hospital** *Peshawar, Pakistan*

* Was responsible for visual inspection of ammonia chillers and chiller maintenance

## Internship *June 2011 – September 2011*

**Olive Laboratories** *Islamabad, Pakistan*

* Performed visual inspection and NDE (PT, MT) of rotary pumps and piping
* Inspection of CUI, fatigue, thermal fracture, galvanic corrosion of piping

# PROJECTS

## Design, Analysis, and Fabrication of a Fuel-efficient Smart Car (FYP) *June 2012 – June 2013*

**Team Manager & Team Coordinator**

* Head of team as Team Manager and Lead Designer
* In charge of Vehicle Design, Aerodynamics, and Computational Fluid Dynamics
* Selected for Shell Eco Marathon Asia, Malaysia 2013, with the name “Team Octa Machina”
* Project obtained 1st Position for “Technical Innovation” in Shell Eco Pakistan held at NUST College of EME, Rawalpindi (Pakistan) on May 14 2013, conducted by Shell
* Project won 1st Position in “Mechanical Engineering Department Project Exhibition” held at UET Peshawar in June 2013.
* One of the pioneers to establish “Society of Automotive Engineers (SAE)” in UET Peshawar

## Installation, Erection, and Initial Testing of Chemical Reactor in Synthesis Plant *February 2015 – September 2016*

**MEP Engineer and QA/QC Inspector**

* Installed and erected Chemical Reactor in an Organic Synthesis Plant for chemical processes
* Performed and executed process piping inspection of Organic Synthesis Plant
  + Inspection and maintenance of Recycle lines
  + Inspection and maintenance of Steam injection points
  + Developing I&TP for corrosion-sensitive injection points such as raw material, reactant, and solvent addition points in a reactor
  + Ensuring safe operation of reactor, reactor fittings, and piping networks after initial hydrostatic testing
* Oversaw and supervised the maintenance and testing of utility service piping replacement of correct reducers, piping spools, taps; and proper heat number, weld number, and identification of joint fittings
* Performed inspection of weld and weld joints of piping networks in Organic Synthesis Plant

# SKILLS

## Software

* ANSYS Fluent - for Computational Fluid Dynamics
* ANSYS Mesh - for Mesh creation and analysis prep.
* ANSYS Structural – for static structural analysis
* ProEngineer Wildfire – for design and drafting
* AutoCAD – for design and drafting
* SolidWorks – for design, drafting, and basic analysis
* MATLAB – for numerical computing
* Microsoft Office (Word, Excel, PowerPoint, Publisher)

## Engineering Codes and Standards

* ASME Section IX – Welding Qualification
* ASME B31.3 – Process Piping
* ASME B16.5 – Flanges and Flanged Fittings
* API 570 – Piping Inspection and Repair
* API 571 – Damage Mechanisms of Process Equipment
* ASME Section V – NDT Examination (PT, MT, RT, UT, Leak Testing)
* API RP 577 – Welding Inspection & Metallurgy
* API RP 574 – Inspection Practice for Piping
* API RP 579 – Material Verification Program

## Languages: English (Very Proficient), Urdu (Very Proficient)