Tahseen Afzal

QA/QC Engineer

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Objectives

To have a growth oriented and challenging career, where I can contribute my knowledge and skills to the organization and enhance my experience through continuous learning and teamwork.

Academic Qualifications

BS Mechanical Engineering
COMSATS Institute of Information Technology, Islamabad
Session: 2011-2015

Pre-Engineering
Govt. Municipal Degree College, Toba Tek Singh
Session: 2008-2010

Matric
Govt. Model High School, Toba Tek Singh
Session: 2006-2008

Professional Experience

I have 3 years of experience as QA/QC Engineer and Inspector in Oil and Gas field including, Oil Refineries, Fertilizers plants, Storage Tanks, Pressure Vessels and Columns.

February 08, 2018 – till date
Descon Engineering Limited, Mianwali Region, Pakistan
Client: Maple Leaf Cement Factory (MLCF), Iskanderabad
QC Engineer

Performing following duties and tasks at Maple Leaf Line 2:

- Generating ITPs for ducts, structure, and cyclone fabrication and erection.
- Conducted and witness the welder qualification skill test in accordance with the WPS.
- Dimensional checking of fabricated ducts and structures.
- Alignment, plumbness, and fit-up checking of ducts segments and structure assemblies.
- Inspection of surface preparation of fabricated items by sandblasting according to SA 2.5
- Painting inspection according to client (MLCF and FLSmidth) provided specifications.
- Preparation of Quality Documents as per company management system.

Additional Responsibilities:

- Administration:
    - Routing of vehicles.

- Attendance record preparation on daily basis.
- Preparation of final payroll for direct and in-direct staff and got it approved from SAP personnel.
- Clear and verify bills (house rents, petrol, and transport bilty etc.).

- Acting planning engineer responsibilities, commercial invoice making and submission to client and get them verified.
- Commercial Proposal preparation and submission to client for Coal Yard Shed Structure and Thermal Heating Services for Kiln Tire 2 cracks Repair.

November 11, 2017 – November 27, 2017

Descon Engineering Limited, Pakistan

Client: National Refinery Ltd. Karachi. (TA 2017, Lube-II)

QC Inspector

I performed the following actions as a QC Inspector in NRL Annual Turnaround 2017 in Lube-II:

- Review and implementation of inspection and test plan (ITP).
- Coordinated with area engineers, supervisors, and client's inspection and operation teams.
- Pre visual inspection of all equipment which are opened.
- Thickness measurement of different parts of heat exchangers' shell, shell nozzle, channel head and channel head cover, floating head, and bonnet with client and third party.
- Inspection of shell cleaning i.e. water jetting.
- Inspection of longitudinal and circumferential weld joints, inlet and outlet nozzles, and reinforcement pads for any crack, corrosion, and mechanical damage and deformation.
- Inspection of shell flange, channel head, and floating head gasket seating area, pass partition and girth flange for any erosion, damage and cracking.
- Monitoring of bundle pulling, insertion and handling to avoid any mechanical damage.
- Inspection of tube bundle after HP jetting inside and outside of the tubes.
- Inspection from tube bundle components such as tubesheet, tube, tie rods and spacers, transfer baffles or support plate, impingement plate, floating head flange and floating head split ring.
- Rolling inspection of tubes by giving pressure to shell side.
- Leakage inspection through gaskets (channel head cover to channel head, channel head to tube bundle flange, flange to shell flange, floating head to cover, and bonnet to shell flange) during hydrotest of shell side and tube side and differential pressure test.
- Marking of plugs of AFC's which need to be opened with client.
- Inspection of tubes and header box after hydro jetting cleaning of these coolers.
- Visual inspection of the plug sheet, and specifically, the plug holes' gasket contact surface for any possible cracking and corrosion.
- Painting inspection of the external surface of header box.
- Visual inspection of the external surface of the fin tubes for any possible mechanical damage and deformation.
- Hydrostatic testing and inspection of tubes, header boxes, and plugs.
- Inspection of vessel internals such as demister pads, distributor pipes, and partition plates and get recommendation for these internals.
- Inspection of demister pads after water jetting, cleaning, and installation.
- Inspection of nozzles after cleaning by flushing lines.
- Inspection and monitoring of leak test of chimney trays in columns.
- Inspection of vessels and columns internal cleaning, all welded joints, glitch grit trays' removal, cleaning and installation.
- Prepared, arranged, and get signed the respective documents of all above inspections for dossier preparation.

October 13, 2017 – October 24, 2017

Descon Engineering Limited, Pakistan

Client: OGDCL (Uch Gas Fields-phase 1)

QC Engineer

Followings were my responsibilities as a QC Engineer at Uch gas fields-phase 1:

- Find out essential places for Blinding/spading for equipment isolation and monitoring of its activities with supervisors.
- Pre visual Inspection of all equipment whichever is opened (like pressure vessels, K.O.Drums, Slug catcher, Incinerator, Deaerator, Reflux drums, flash drums, amine and glycol sump, LP and HP boilers, Cooling tower, Heat Exchangers, Surge drums, Columns and Towers etc.
- Location marking and tagging of valves according to the clients provided list with valve's supervisor and client.
- Monitoring of valves removal and putting tag in order to keep the record of dismantled valves.
- Visual inspection of gate valve's gate, seat, stem and bonnet and check valve's flappers, pins, hinges, shaft, and seal.
- Inspection of valves after lapping, greasing, changing pins, hangers, and gland packing.
- Inspection of hydro test of valves with client mechanical team.
- Pre inspection of filters (charcoal filters, filter coalescer) and gas turbine filters.
- Inspection and monitoring of discharging charcoal, cleaning, and charging of charcoal and water filling with client's mechanical and process teams.
- Detailed and post cleaning inspection of filter coalescer after draining, removal of filters, and cleaning of filters hangers. Final inspection after new filters installation and tighting of plate above filters.
- Inspection after Cleaning / Chemical Cleaning, &list out the repair activities in accordance with procedures and standards.
- Inspection after HP Jetting of tube bundle and shell side in Heat Exchangers, and Hydro test shell &Tube sides etc.
- Inspection of Drums & Vessels for its Mechanical Integrity, review of all NDT Related activities & final Box – Up.
- Inspection of LP and HP boilers after cleaning, painting, dismantling FD Fan and cleaning of Steam drum and Mud drum internal and baffle plates and inspection of refractory and tubes inside the furnaces of these boilers.
- Inspection of hydro test of boilers' furnace tubes and final inspection.
- Visual inspection of Striper and Absorber Column, Identifying damaged trays, welding of damaged trays, and trays cleaning and inspection after repairs then final Inspection for equipment box up.
- Prepare and arrange documents of all above inspections for final dossier.

April 10, 2017 – May 04, 2017

Descon Engineering Qatar LLC

Client: Qatargas, Ras Laffan Industrial City. (TA 2017, Train 1-SRU 2 and REGEN 1)

QA/QC Inspector

Descon Engineering hired me as a QA/QC Inspector for Qatargas Train 1 shutdown. I performed the following tasks as well:

- Review and implementation of inspection and test plan (ITP).
- Coordinated with client inspection team, third party inspectors, area engineers and supervisors.
- Pre visual Inspection of all equipment which are opened.
- Make sure the arrangements (availability of permit, hole-watcher, harnesses, lights etc.) are complete before doing any inspection.
- Inspection of Furnaces, Vessels, Column, Sulphur pit, and Heat exchangers with client inspectors and noted down all the recommendations for each equipment.

- Inspection of furnace damaged refractory before repair and after repair.
- Inspection of demister pad after removal and cleaning and witnessed with client inspectors.
- Marking of NDE locations with client inspectors within columns and vessels to perform NDT.
- Make sure that all of NDE marked locations are cleaned power brushed then offer for NDT.
- Inspection of column internals like chimney trays, bubble cap trays, valve trays, trays manways, deflector plates, accumulator, seal pan, distributor pipes, schoepentoeter and Hi-Fi schoepentoeter, oil pot, and weld seems like 'T' joints, nozzles' weldments, circumferential and longitudinal weld seems etc. with client inspector.
- Follow up the recommendations given by client after inspections.
- Inspection of hydrojetting cleaning (tube bundle side and shell side) and air blowing (tube side) with client inspectors prior to conduct IRIS.
- Witnessed the hydro test of heat exchangers (tube side and shell side) with client inspectors.
- Witnessed the coil side hydro test of Sulphur pit and Sulphur condensate heat exchangers with client inspectors.
- Inspection of cleaning after Sulphur removal, demister pad water washing, and concrete repairing in Sulphur condensate heat exchangers with client and third party inspectors.

February 19, 2017 – April 04, 2017

Descon Engineering Qatar LLC

Client: Qatargas, Ras Laffan Industrial City. (TA 2017, Train 7-SRU 1 and SRU 2)

QA/QC Inspector

Worked as a QA/QC Inspector in Qatargas Train 7 shutdown with Descon Engineering Qatar and performed the following duties:

- Make sure the arrangements (permit, hole-watcher if CSE required, safety belts, disposable coveralls, and lights etc.) are completed before doing initial, intermediate, detail, and final inspections.
- Coordinated with client inspectors to carry out inspections.
- Pre visual Inspection of all equipment which are opened (like pressure vessels, Heat Exchangers, Columns, Sulphur pits, and Furnaces etc.)
- Inspection of all of these equipment in coordination with client inspection team and third part inspectors by going inside if required and noted down all of the recommendations given by these inspectors.
- Communicate with area engineers and supervisors to carry out the maintenance work as per client recommendations and follow up the work progress by implementing the inspection and test plan (ITP).
- Inspection of columns and vessels after removing the internals (like demister pads, bed limiter, rasching rings, meshes, beams, and trays) for detail inspection of these equipment.
- Inspection of weld seems like circumferential and longitudinal weld seems, T joints, nozzles' weldments, and supporting rings to shell joints of columns, vessels, and heat exchangers with client and third party inspectors.
- Inspection of furnaces after erection of safe scaffolding from burner side and ferrule side and entire refractory and noted down the recommendations for refractory repair and replace of ferrule which are damaged or burnt.
- Follow up all of these maintenance works and did inspections very often to reduce the rate of poor quality and raise FQA when any discrepancies found related to cleaning and repair work.
- Coordinated with NDE team to indicate the locations for NDT purpose.
- Witnessed the cleaning of heat exchangers (tube bundle side and shell side) after HP Water Jetting and air blowing with client inspectors prior to conduct IRIS.
- Witnessed the hydro test, pneumatic test, and conduct soap test with client inspectors.
- Inspection of columns and vessels after cleaning and installation of internals and checked the tightness of bolts with spanner and small hammer.

- Inspection of demister pads after cleaning and installation either the segments are properly inserts and tightened or not and checked the mesh gaps, looseness of segments.
- Inspection of column trays, trays manways, tray valves and bubble caps, supporting ring, clamps and beams after cleaning and installation.
- Followed the Blind Tracking List (BTL) provided by client in order to ensure the proper bolt torqueing by checking the tag and with the help of spanner and small hammer.
- Checked the application of masking tape to the disturbed flanges to check each of these flanges during commissioning.
- Prepare and get signed the QC Checklists related to each equipment and disturbed flanges.
- Prepare and arrange all the documents (like RFI's) related to these equipment and get signed.
- Make sure the proper arrangement of all of these documents and checklists to prepare the final dossier and submit to the client.

January 05, 2017 – January 30, 2017

Descon Engineering Limited, Pakistan

Client: Fauji Fertilizers Bin Qasim Limited, Karachi. (ATA 2017, Ammonia Plant)

QC Inspector

I was hired as QC Inspector by Descon Engineering at FFBL and following were my responsibilities:

- Monitoring of blinding activities for equipment isolation as per client's provided list.
- Took dimensions' measurements of old Transfer line with client and surveyor.
- Monitoring of dismantling activities of Transfer line attached with the primary and secondary reformer.
- Inspection of joints weldments after welding as per client provided WPS and follow up the activities related to welding.
- Internal and external inspection of primary reformer, secondary reformer, vessels, columns, and heat exchangers with client.
- Inspection of furnace internals like cast able refractory, tubes, refractory bricks, z blocks, burner blocks, and peep holes with client inspection team.
- Inspection of refractory after repairs and JT Thorpe arrangements.
- Inspection and monitoring of welding of catalyst tubes top flanges according to the provided WPS.
- Witnessed the application of Mortar by third party (Amec Foster Wheeler) at refractory between a male and female joints of Transfer line before fit-up.
- Monitoring of installation of newer Transfer line and make sure the new Transfer line is correctly placed according to older dimensions.
- Inspection of columns internals like demister pads, shell, lining, welding joints, supports and supporting ring, trays and packing, and top and bottom dish ends with client inspection team.
- Build the checklists for each equipment to make sure which activity had been done.
- Make sure the preparation and arrangements for all documents related to inspection activities for dossier submission to client.

October 03, 2016 – October 29, 2016

Descon Engineering Limited, Pakistan

Client: Engro Fertilizers Limited, Daharki. (ATA 2016, Plant-II)

QC Inspector

Descon Engineering Ltd. hired me as QC Inspector at Engro Fertilizers Ltd. (Plant-II), Daharki and following were my key responsibilities:

- Inspection and monitoring of maintenance work of Vessels, Columns, Heat Exchangers, and Furnace.
- Make sure that the work permit for a particular activity has been provided or not.
- Find out essential places for Blinding/spading for equipment isolation and monitoring of its activities with supervisors.

- Pre visual Inspection of all equipment whichever is opened (like pressure vessels, Heat Exchangers, Columns and Towers etc.
- Inspection after Cleaning / Chemical Cleaning and DPT, &list out the repair activities in accordance with procedures and standards.
- Inspection of pre heat, post heat during build-up and welding and PWHT within vessels for repair work of cracks found in vessels.
- Monitoring of temperature control (pre-heat and post-heat) at steam header outlets of furnace for buttering of old base metal as the old base metal was of P11 and the new base metal to be welded with old one was Stainless steel (SS).
- Inspection of bevel after buttering and PWHT of P11 material after welding with the new material.
- Careful reading of PWHT graphs to check either the heating rate, cooling rate, and holding time was according to client's given standards or not.
- Visual inspection of catalyst removal through vacuum generator and loading of catalyst to the furnace tubes.
- Inspection of fit-up, welding, and DPT of root pass and final welding of expansion bellows at hot air lines according to the approved standards with third party client.
- Inspection of fit-up and welding of pig tails with tubes of furnace at the collar side and header side according to the given WPS and made RT requests for these joints.
- Inspection of columns internals (trays, rings, down comers, demister pad, bolts, supports, nozzles, linings, and welding) with third party client and list out the recommended repairs and after that inspection of that repair work including welding of supports under the ring, adjustment of mesh gap and tightening of lose bolts.
- Monitoring and inspection of pall rings removal and loading into the columns and ensure the safe work at site.
- Inspection and witnessed the shell and tube (inside and outside) of heat exchangers before and after HP Jetting with client inspection team.
- Inspection of heat exchanger repair work (tube plugging, rolling, and welding of cracks at nozzles first power brushing and then build-up at shell inside) and satisfied the client's maintenance and inspection teams.
- Monitoring, inspection and witnessed hydro-test (before and after repair work if any) and fill test of heat exchangers for 60 minutes with client's inspection team.
- Inspection and monitoring of final box-up and make sure the de-blinding, bolt tightening, and manways close-up done properly or not.
- Ensured the preparation and arrangements of all related documents for dossier submission to client.

April 22, 2016 – May 24, 2016

Descon Engineering Limited, Pakistan

Client: National Refinery Limited, Karachi. (ATA 2016, Fuel Refinery)

QC Inspector

I was hired by Descon Engineering Ltd. at National Refinery Ltd. (NRL) ATA 2016 in Fuel area as QC Inspector. The work assigned to me was the inspection of Furnaces, Heat Exchangers, Vessels, Columns and Critical Pipeline (CPL). There, I performed the following tasks:

- Complete inspection of furnaces (pre cleaning, sand blasting, post cleaning, hydro testing, and pneumatic testing).
- Inspection of radiant and convective section tubes' thickness with third party client.
- Inspection of furnaces and common stack's existing refractory and repair of refractory as per codes and standards.
- Pre and post cleaning of furnace burners.
- Inspection of burner's mesh, and duct plates.
- Witnessed draft gauges with client and pressure gauges' calibration certificates.
- Inspection of welding and cleaning of replaced and old snuffing steam lines.
- Monitoring and inspection of welding and PWHT as per WPS of furnace Alloy Steel header leakage according to codes and standards.
- Perform internal, external Visual, and NDE inspections of vessels and columns.

- Inspection of fit up, and alignment of pipes.
- Monitoring and inspection of DPT of every butt weld joint.
- Inspection of fabrication, modification, and erection of pipelines as per drawing.
- Coordinate with client and subcontractor for healthy and responsive team work.
- Complete inspection of heat exchangers (pre cleaning, post cleaning, leakage testing, hydro jetting, lancing, and hydro testing).
- Monitoring of pulling tube bundles and transportation to yard for hydro jetting process.
- Preparation and arrangement of documents for all of these inspections.
- Prepare and sign Final Box up certificate of equipment from client.
- Preparation and submission of final dossier to client.

October 26, 2015 – November 21, 2015

Descon Engineering Limited, Pakistan

Client: Fatima Fertilizer Company Limited, Sadikabad. (ATA 2015)

QC Inspector

I was hired by Descon Engineering Ltd. at Fatima Fertilizers Company Limited (FFCL) ATA 2015 and was placed in Nitrogen Phosphate (NP) Plant as a QC Inspector and worked:

- To ensure approved welding procedure, qualified personnel to ensure all quality requirements of fabrication and modification are met in accordance with client procedures and international codes of practice use methods and consumables.
- To monitor welder performance and conduct visual inspections and DPT of welds and repair of welds in accordance with Company (FFCL) procedures and international codes of practice.
- To provide technical guidance for welding sequence and distortion control in accordance with procedures and job requirements.
- To conduct fit up and dimension inspections as per Inspection and Test Plan.
- To check and record welding parameters and verify compliance with approved Welding Procedure Specifications (WPS) and technical procedures witnessed NDT Inspections such as UT, VT, and PT along with review of the reports.
- Inspection of nozzle orientation as per drawing of 8 vessels top and bottom dish ends.
- Conduct all types of inspection (bending, plumbness, and UT) of SS tank fabrication according to code (API 650), drawing and welding as per WPS.
- Monitor the cutting, removal, and transportation of old dish ends and fabrication, transportation and erection of newer dish ends and tank.

July 23, 2013 – September 01, 2013

Descon Engineering Limited, Pakistan

Internee

I joined the Descon Engineering Ltd. in July as an Internee and was placed in QA/QC Department in Domestic Construction and Services and performed the following duties:

- Helped in planning of Project Khanki Beraj.
- Completed assigned work on Pumps, Turbines, and Engines.

Academic Projects

- **Electric Power Generation Using Speed Breaker**
  Final Year Project

Used rack and pinion mechanism to convert the kinetic energy of the moving vehicle into mechanical energy of the shaft that is connected to the generator which then converts that mechanical energy into electrical energy.

- **Timer Fan**
  Digital Logic Design (DLD) Project

- **Conveyor Belt**
  Mechanics of Machines Project

Area of Interest

- Engineering Maintenance
- Quality Control
- Project Management
- Project Planning

Software Skills

- **Mechanical Tools Known**
  - Auto Cad
  - SolidWorks
  - Primavera

- **Other Soft wares**
  - MS Office: Excel, Word, PowerPoint

Personal Skills

Communication Skills: Excellent interpersonal & communication skills oral & written, highly motivated, enthusiastic and capable of working on initiative, willing and able to quickly adapt and learn new technology.

Problem Solving Skills: My analytical skills help me troubleshoot problems and uncover root causes.