** Atif Hafeez**

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 **Date of Birth: 10/11/1982**

**PROFILE**

A civil and structural engineer with over eleven years’ experience on engineering projects in a wide range of sectors including Nuclear and Defence. Capable of doing complex calculations manually and well versed in the use of analysis software. Experienced in performing static and dynamic analysis and the design of steel and concrete structures to UK and US national standards. Along with technical aspects of projects, possess a wide range of experience in commercial aspects by preparing contract offers/variations, and managing projects from the initial offer through to completion.

**CORE SKILLS**

* Design and structural analysis of safety related structures.
* Technical report writing.
* Complex analysis using FEA techniques.
* Providing support work for safety cases.
* Experience in British and American codes (ACI 318, ASCE 4-98 and ASCE43-05 etc)

**WORK EXPERIENCE**

**Nov 2016 – to date WSP Parsons Brinkerhoff Senior Engineer**

 ***Project Role: Lead Engineer on Nuclear and Energy projects***

* Fragility Evaluation for Beyond Design Basis Events (BDBE) for Wylfa Nuclear Plant in UK. The assessment of the reactor building to justify that cliff edge affect is not applicable for the seismic design as a result of sufficient residual capacity using ASCE 43-05.
* Lead Engineer for the provision of ground works at Mybster and Thurso Substation in Scotland. Responsible for checking and approval of all the foundation and bund wall design at the Substation and assisting the client for the ground work required for the installation of new shunt reactor and electrical equipment.
* Design Checker for 161kV and 330kV Substations projects in Ghana. Checked the calculations and design for transformer foundations, cable trenches, control building and foundation, steel gantries at the substation, reactor foundation and other switchyard equipment.
* Lead Engineer for Gasholders structural surveys across a number of sites across UK. The tasks include complete structural survey of large steel frame gasholders and associated structures at the site and produce condition assessment reports to substantiate the structure till their planned demolition date.
* Produced design calculations for a number of reinforced concrete impact slabs constructed to protect High Pressure Gas pipelines buried under the ground. The slabs were design as per the National Grid and Cadent Gas specification for the design of structures over high risk P18 classified Gas pipelines and based on the BS EN 1991-2 traffic loading regime.

**April 2012 – Oct 2016 AMEC Foster Wheeler Civil/Structural Engineer**

 ***Project Role: Structural Engineer***

* Produced Engineering Substantiation Reports (ESRs) for a number of System, Structure and Components (SSCs) at B13 facility, Sellafield nuclear site in UK as part of the Long Term Periodic Review (LTPR). The work involved reviewing the existing structural calculations, ALARP documents and maintenance databases to substantiate the SSCs against their performance requirements. The onerous client requirements included checking the SSCs for beyond design basis events such as a seismic margin earthquake, flood protection, shielding from radiation, drop load, vehicle and missile impact.
* Provided expert witness support to Westinghouse as part of the claim relating to the design and construction of two new nuclear reactors in USA. Part of the team that looked into the key concerns that the US NRC raised regarding the design of the Enhanced Shield building and provided an independent view on the issue.
* Responsible for the preparation of the initial contract offer, project management to carry out a structural assessment of a steel cradle assembly used to support the Vanguard class submarine during the docking/undocking operation at Naval Base Clyde. Detail calculations were performed using MathCAD to check the strength of all the members of cradle assembly.

 ***Project Role: Project Manager***

* Worked as Intelligent Customer for a number of conceptual design projects for Low Level Nuclear Waste Repository (LLWR) in Cumbria, UK. The role involved overseeing an engineering team producing designed solutions for the client (LLWR). The tasks involved assistance in the production of tender documents including Scope of Work, Specification and Datasheets. Assistance also included managing financial targets by analysing the profit and loss accountability for the team.
* Part of bid management team for Heysham bulk fuel storage tank strength assessment job. The successful award of the initial contract also led to further work related to the repair work identified in the strength assessment project. The task involved preparation and reviewing the commercial aspects of the bid, ensuring all services are included in the final price to the customer. Production of variation in the cost documents due to award of further work from the client.

**June 2010 – April 2012 Assystem UK Ltd Structural/Stress Engineer**

 ***Project Role: Structural Engineer***

* Structural Engineer/Project Manager, responsible for scoping & delivering a package of structural calculations and reports for technical review by Sellafield nuclear site. Carried out an assessment of the existing steel and concrete structures to determine their ability to carry additional loadings from a new pipe work support and access platform structure. Responsible for proposing & designing a strengthening structure and detailed connections to the existing structure which were constructed as part of the modification.
* Part of the structural design team for various nuclear decommissioning projects at Sellafield nuclear site. In a major task produced 3D models and structural calculations for a Skip Bogie and its driving mechanism using crane codes BS2573 (1 & 2). The Bogie was designed to be used at the B30 facility for the transportation of radioactive waste from pond to the cell by removal flasks. The project had very tight deadlines, therefore the work had to be very closely managed and carefully prioritised.
* Carried out FEA Analysis using Ansys software to assess the structural integrity of a transportation trolley carrying very heavy loads. A Stress Report was produced based on the results of the analysis highlighting the likelihood of failure of any of the trolley components.
* Carried out drop load analysis and produced an Engineering Advice Note (EAN) on the load bearing capacity of a steel liner located in a nuclear facility in France. The study involved complex stress calculations using Energy Dissipation Method to determine the load bearing capacity of the liner plate and producing an EAN based on the result of these calculations that includes statements on the implications to the nuclear safety case along with proposals for strengthening measures.

**Jun 2007 – Jun 2009 Arch Henderson Graduate Civil Engineer**

 ***Project Role: Resident Engineer – Kelvin Quay – Glasgow***

* Provided Liaison with the contractors during the installation of sheet piling wall at the quay site. The role involved checking the work as per the drawings and schedule and solving routine queries during the construction.
* Built strong relationships with the client, contractor and third parties during design and installation of sheet pile wall, resulting in benefits for all the share holders.

 ***Project Role: Design Engineer – Maritime Structures – Glasgow***

* Produced structural calculations and design for a Sheet Piling project at Primrose Quay, Glasgow. The task involved calculating the pressure on the proposed sheet pile retaining wall from the earth, water and surcharge loads. Assessing the maximum moment, shear in the sheet pile and the design of the embedment depth using SupportIT software. The design of the sheet pile wall and holding tie rods was carried out using BS6349-2 and the Arcelor sheet piling designing manual and included checking the bearing stability and global stability of the sheet pile wall.
* Produced feasibility report to assess the suitability of a site at Queens Quay near Glasgow for the development of a new riverside berth. The task involved inspection of the site and structures by land and from boat. Preparation of drawings on AutoCAD. Checking the adequacy of existing structures, depth of water for potential vessels, services for potential users, access to the site and the selection of the pontoon type.
* Produced structural calculations and report for the design of Pier facility at Portavadie Marina Development. The task involved calculating the extreme environmental loads from the site data provided, site investigation and site surveys to confirm the location of existing structures. The design of the runway beam for the pier was carried out to BS5950, the steel tubular pile using BS6349-2 and the Piling handbook, and slab using BS8110. The calculations for the walkways, fender and rail fixing were carried out based on the berthing energy by using the appropriate design manuals.
* Carried out the design of a 22mx10m ground bearing concrete slab for a warehouse floor using the design manual

TR550. The loading considered in the design included wheel loads at three different locations of the slab i.e. interior, edge and corner. The design also included the allowance for creep, drying and plastic shrinkage.

 ***Project Role: Design Engineer – Temporary Structures – Glasgow***

* Produced design calculations for excavation support at a number of cabling projects. The tasks include design of steel sheet piles, coffer dams, timber trench support systems, shoring equipment and excavation covers for temporary road access etc.
* Carried out ground bearing capacity checks and soil settlement analysis for heavy duty cranes, MEWP and other machinery operating at a number of Power Station Sites.
* Checked temporary scaffolding design for repair and maintenance work at a number of Power Station projects all over the UK.
* Designed Haul Roads and performed third party design checks for temporary bridges, required for access to construction sites.
* Assist the Temporary work Co-ordinator and Site Engineer about the requirement of temporary work at the sites and potential solution for construction activities.
* Designing of temporary structures (Formwork, Falsework, Shoring and Facade Retention) using the specialised designing software and British Standards BS5975 and BS6399.

**COMPUTER SKILLS**

SAP2000 (FEA Software) Scale (Structural Analysis) ANSYS (FEA Software) MathCAD

AutoCAD Inventor (3D Modelling) SupportIT (Sheet Pile Design)

**EDUCATION**

MSc Business Studies Glasgow Caledonian University, UK 2007

BEng Civil Engineering NED Engineering University 2003

**ADDITIONAL**

Security Clearance of “SC” Level

Full Clean Driving License

British Citizen