**MIRZA** **MIRZA.290932@2freemail.com**

 **MECHANICAL ENGINEER**

**OBJECTIVE**

*To take up the position of a Mechanical Design Engineer in your esteemed organization with a set of skills, knowledge and experience in the field and thereby proving to be a positive sway in the advancement of the organization.*

**PROFESSIONAL SYNOPSIS**

* A dynamic Mechanical Engineer (Pearl Qualified Professional) with **over 2.5 years** of rich Overseas & Domestic experience in **MEP** **Design & Supervision of the various commercial projects, Design & Technical due diligence of District cooling plants, Hydraulic & Stress Analysis of chilled water pipes in district cooling plants.**
* Presently associated with **Fittons Engineering Consultancy LLC, UAE** as a **Mechanical Design Engineer.**
* Proficient in managing **Design, Engineering & Analysis** related operations, in-process inspection, team building and co-ordination with internal / external departments.
* An **effective communicator** with excellent relationship building & interpersonal skills. Strong analytical, problem solving & organizational abilities. Possess a flexible & detail oriented attitude.
* Awareness of **ASHRAE, ASME, NFPA standards** & regulations relating to MEP and Stress Analysis.

**CORE COMPETENCIES**

* ***MEP Design & Detail Engineering***
	+ - * + Developing the conceptual design of HVAC System entailing drawings & specification study, quotation enquiry study & finalization, vendor selection & finalization, schedule for development, first sample approval, and final design approval.
				+ Preparing MTO/BOM and coordinating for the selection of suitable equipments and materials to meet design reliability and quality goals.
				+ Designing the system to meet client requirements & translating the design model using various tools.
				+ Reviewing the engineering / design changes & resolving quality related problems associated with design.
				+ Final checking and release of engineering drawings for the prototype and subsequently for construction.
* ***Hydraulic Analysis***
	+ - * + Sizing, routing & the pressure drop calculation of the chilled water pipes in the district cooling network and select the pumps accordingly.
				+ Modifying the sizes of designed chilled water pipes to decrease the pressure drop as per the requirement.
* ***Stress Analysis***
	+ - * + Stress Analysis of chilled water pipes in the district cooling network along with ETS room piping to keep the stresses within the allowable as per ASME B 31.3.
				+ Flange leak analysis of the flanges in the piping network.
				+ Nozzle limit analysis to keep the forces and stresses acting on the nozzles of the major equipment within the allowable provided by the manufacturer.
* ***Man Management***
	+ - * + Directing, leading and motivating workforce; imparting continuous on job training for accomplishing greater operational effectiveness/ efficiency.
				+ Working on succession planning of the workforce, rendering technical guidance to the staff, management activities, appraising the member’s performance & providing feedback.

**ORGANISATIONAL EXPERIENCE**

* **Associated with Engineering Consultancy LLC, UAE since April 2014 as a Mechanical Design Engineer.**

***Projects Handled***

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| **Title****Capacity** | **:** **:** | **MEP Design of the Chemical Manufacturing Complex, Abu Dhabi, UAE****650 TR** |
| **Client** | **:** | **Sichem LLC** |
| **Architect** | **:** | **S.A Miro Inc., Abu Dhabi, UAE** |

 Job Responsibilities:

* + - * + Detail study of project scope of works, client requirements, drawings and standards.
				+ Heat load calculation & tonnage requirement of the proposed building based on ASHRAE Fundamentals using HAP software.
				+ Calculation of the required ventilation rate based on the ASHRAE 62 standards.
				+ Preparation of the conceptual drawings and submit to the client.
				+ Preparation of Equipment Schedule, Schematic drawings, layouts, installation detail drawings.
				+ Ensuring to achieve Energy Efficiency as per ASHRAE 90 standards.
				+ Achieving the mandatory and optional credits to comply with the Estidama pearl 2 rating.
				+ Calculation of the pump flow rate and head for the chilled water using ASHRAE Fundamentals.
				+ Calculation of domestic water requirement, routing of water supply & drainage pipelines.
				+ Fire protection design as per NFPA & UAE civil defence codes and standards.
				+ Attend kick off meetings, design issues meetings and construction meetings with client, counterpart companies and vendors.
				+ Coordinating with counterpart companies to clear and finish designing and engineering issues.
				+ Maintaining planned schedule dates and completing the works without lagging.

**2.**

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| **Title** | **:** | **Technical due diligence for Project Buddy** |
| **Client** | **:** | **Tabreed** |
| **Plants** | **:** | **Tamouh DCP, Adnec DCP, Shams, Saraya DCP & Al Qudra DCP** |

 Job Responsibilities:

* + - * + Detail study of project scope of works, client’s requirements.
				+ Attend kick off meetings, project progress status meetings with the client.
				+ Visit the site and verify the As Built drawings with the site conditions
				+ Verify the installed equipment capacities with the designed equipment capacities and report if there is any deviation.
				+ Verify the power and water consumption efficiencies of the plants with the design requirement.
				+ Check all the technical documents, drawings, Authority approvals, Building permits, NOCs etc.
				+ Check the compliance of the design, quality control, technical specifications with the Industry standards.
				+ Examine any major historical failures of the plants and the impact of those failures on the future operational efficiency of the plants.
				+ Comment on the quality of the refrigerant used in the plants.
				+ Check whether the preventive maintenance of all the major equipments are in compliance with the manufacturer’s specification or not.
				+ Prepare and submit the report to the client.

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| **Title** | **:** | **Hydraulic & Stress Analysis of Chilled water pipes** |
| **Client** | **:** | **Command of Military Works** |
| **Contractor** | **:** | **Asqalan Construction & Development Est.** |

 Job Responsibilities:

* + - * + Detail study of project scope of works, Clients requirements, drawings and standards.
				+ Hydraulic Analysis of the given chilled water network to check the pressure drop using HEVACOMP/Pipe Flow Expert software.
				+ Modify the pipe sizes to bring the pressure drop with in the limit of the available pump head.
				+ Check for the occurrence of any back pressure within the network.
				+ Prepare the report and submit it to the client.
				+ Stress analysis of the given chilled water network along with ETS room pipes to keep the stresses (Hydrostatic, Sustained & Expansion) within the allowable as per ASME B31.3 using CAESAR-ii software.
				+ Suggest the location and type of supports to keep the stresses and forces within the limits.
				+ Carryout the flange leakage analysis.
				+ Keep the forces and moments on the nozzles of mechanical equipments within the allowable provided by the equipment manufacturer.
				+ Prepare the report and submit to the client.

***Other Projects Handled***

* + - * + District Cooling plant design for Marafeq Qatar at Lusail city, Qatar (On going).
				+ District Cooling plant design for Dubai Outlet mall, Dubai (On going).
				+ HVAC design complying with the 2 pearl Estidama requirements of Coca Cola Plant, Al Ain, UAE.
				+ HVAC design and supervision of Zohra Golf Club, Ajman, UAE.
				+ HVAC design with ESTIDAMA requirement of Animal Conservation facility, Deleika.
				+ Supervision of the installation of three chillers & 6 FAHUs in the Bird House of Al Ain Zoo, Al Ain, UAE.
				+ HVAC design of Zulu Airport, Africa.
				+ Peer review of HVAC design of a 4 storey residential building at Dubai Investment parks (DIP) for Emicool.
				+ Hydraulic and Stress Analysis of the chilled water network along with ETS room piping for GISCO, Abu Dhabi, UAE.
				+ Hydraulic Analysis of chilled water pipes external network for Danet (Al Qudra Plant), Abu Dhabi, UAE.
				+ Stress Analysis of hot oil and chilled water pipes of Sichem Plant.
				+ Working as Lenderer’s Technical Advisor for Bank Al Fransi, Saudi Arabia to check the operations and maintenance of the district cooling plant at Dhahran, Saudi Arabia owned by Saudi Aramco on a monthly basis and submit the report to the bank.
				+ Working as LTA for Abu Dhabi Commercial Bank to check the construction progress of the Dubai Parks district cooling plant on a monthly basis and submit the report to the bank.

**QUALIFICATION**

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| **Degree/Certificate** | **Institute** | **University/Board** | **Aggregate (%)** |
| B.E (Mechanical) | Muffakham Jah College of Engg. and Tech. | Osmania University | 81.12 |
| Intermediate (M.P.C) | M.S Junior College | Board of Intermediate Education | 95.3 |
| S.S.C | Madina Mission High School | Board of Secondary Education | 86 |

**TECHNICAL SKILLS**

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| Operating System | : | Windows 95 / 98 /2000 / XP / VISTA, MS Office |
| Designing Packages | : | HAP, Auto cad, Revit, Solid Works |
| Analysis Packages | : | Caesar-II, Hevacomp, Pipe Flow Expert (Basic), ANSYS (Basic) |

**VALUE ADDITIONS**

* Fully aware of Mechanical international standards like ASHRAE, ASME, ANSI, NFPA etc.
* Good public speaker with a flexible and outgoing nature.
* Good team player who communicates constructively and listens to the group members actively.
* An acceptable all-rounder cricket player.

**ACTIVITIES & HONOURS**

* Honored with a GOLD MEDAL by Madina Education Society for securing 95% in Intermediate.
* Gained the status of Pearl Qualified professional (PQP) which enables me to carry out ESTIDAMA (Sustainability) projects within the emirate of Abu Dhabi, UAE.
* Presented Paper on “Internal Combustion Engines” in Adsophos 2011 organised in our college.
* Secured 2nd position in the event “Dexter’s lab” and participated in the event “Quizzard” in Adsophos 2012 organised in our college.
* Volunteered for the event “Green Hyderabad” in Adsophos 2013 organised in our college.
* Secured 3rd position in Hardware modeling organized by IEEE-MJCET.
* Taken three months Internship on “Study of oil rigs” from Bharat heavy electrical limited.

**PERSONAL DETAILS**

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| * Date of Birth
 | : | 04-June-1991 |
| * Nationality
 | : | Indian |
| * Marital Status
 | : | Unmarried |
| * Languages Known
 | : | English, German, Telugu, Urdu. |