102821-PLD-E-2007
Lead Piping Design Engineer

Holds a B. Sc. in Mechanical Power Engineering and has over 11 years of office and field hands-on experience in Mechanical and Piping engineering mainly in Power Industry with exposure to entire spectrum of BOP systems (including Gas Turbine interfaces, Steam Turbine interfaces, Utilities, Compressed Air, Fuel Gas, Fuel Oil, etc.). Experienced in performing hydraulic calculations using AFT Arrow, AFT Fathom, piping stress analysis using CAESAR II, Piping and Valve MTOs, Pipe Wall Thickness calculations, Pipe Specs, Requisitions/Technical Bid Evaluations for Mechanical equipment and Piping, Field Walkdowns, responding to Site Technical Queries, and conducting HazOp studies. Experienced with Power Plant systems and P&IDs, valve/piping codes and standards (ASME B31.1, B31.3, B36.10, B16.34, API 610, API 650, WRC-107/297, NEMA-SM23, ANSI B73.1, etc.).

PERSONAL DATA

Nationality	:	Egyptian
Gender	:	Male
Residence	:	Currently KSA

EDUCATION

: B. Sc. in Mechanical Power Engineering, Ain Shams University, 2007

LANGUAGES

Arabic	:	Native Language
English	:	Fluent

COMPUTER SKILLS

: Windows, MS Office (Word, Excel, Power Point), Internet
: CAESAR II
: AFT Fathom
: AFT Arrow
: SmartPlant Review (SPR)
: Navisworks Freedom
: CAEPIPE

TRAINING COURSES AND CERTIFICATIONS

: Microsoft Office Programs: Certified by YAT Training Institute for Microsoft Word, Excel, Power Point and Outlook.
: ASME B31.3 with Dr. Ahmed Dweib (Stress Analysis Specialist and ASME Authorized Global Instructor).

: ASME B31.1 Code and piping design restrictions, and related Piping Standard Specifications (Certified by AUC, Mar. 2011). Attended an intensive course with Mr. Mohinder Nayyar (Chair of ASME B31.1 Committee), Jun. 2011.
: Typing Skills: typing speed of 50 wpm (tested).
: Communication Skills: professional and effective communication exercised throughout working history supplemented by training courses conducted by Bechtel Specialists.
: Management Skills: Certificate of Achievement in Management (AUC, Aug. 2007). Includes: Principles of Management, Marketing Management, and an OB course achieving a GPA of 4.0 in all subjects.
: First Aid Course (Certified by Egyptian Red Crescent on Dec. 2009).
: English (TOEFL iBT Overall Score: 95).

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Jan. 2017 till now
Employer : WorleyParsons Engineering Consultancy Company (WPECC)
Project : PP13 & PP14 1900MW Combined Cycle Power Plants - KSA
Job title : Senior Mechanical / Piping Field Engineer
Job Description : Main role and responsibility to support Construction and Commissioning teams in resolving mechanical/piping engineering problems that arise during the Construction/Commissioning phases. This includes evaluating field modifications and redlining P&IDs/Isometrics to enhance design for better operation and maintenance, accelerate construction, facilitate pre-commissioning activities (such as flushing or air-blowing), evaluate testing failures, and/or clear design interface discrepancies. Other tasks include reconciliation of Piping and Valve MTOs, communicating with many piping/equipment Vendors to resolve NCRs, piping/valve shortages, and responding to Contractor Technical Queries (TQs). Some of the achievements include:

- Supported Pre-commissioning team on PP13 by performing hydraulic calculations to define Fuel Gas piping air-blow pressures and throttle valve sizes to achieve required Cleaning Force Ratio (CFR).
- Supported Pre-commissioning team on PP14 by performing hydraulic calculations to assess different flushing operating modes for Fuel Oil supply and return piping, and selecting the optimum flushing scenarios to meet flushing acceptance criteria.
- Supported Construction team in understanding root-causes of Fire Protection system failures near ASL Tank Farm area and prepared a detailed failure analysis report.
- Evaluated the addition of a service-air branch to the existing GT bleed air to APU to facilitate offline cleaning of the GT Pulse Air Filters. Stress Analysis performed using CAESARII to reverify that pipe stresses, equipment/support loads are within allowable limits.
- Performed hydraulic calculation and P&ID redline for GT Nitrogen Purge piping to support First Fire milestone including safety valves and pressure regulators to meet GE requirements at LF Recirculation/N2 Purge Skid.
- Supported Commissioning Team by addressing and assessing Mechanical equipment operational failures and NCRs. Proactively

coordinating and continuously following up with Vendors for closure of NCRs to allow Commissioning team to commissioning plant (such as GE, STF, ITT for Water Pumps and Alfa Laval for ASL Pumps).
- Supported Construction team by performing piping and valve MTO reconciliations for the entire Large-bore Balance of Plant (BOP) and High Energy piping (reconciled over 800 piping commodities and over 7000 valves) to identify and evaluate alternatives for confirmed shortages that would otherwise delay key project milestones by months (such ASL Tanks A and C MOVs, Potable Water shortages, Raw Water shortages, Instrument Air shortages, etc.).
- Managed High Energy Piping Supports package between Vendor and Contractors. Weekly meetings with Vendor to ensure deliveries are meeting schedule and finding effective solutions to obstacles. Supported Construction team by initiating and consolidating a Master List for all High Energy Pipe Supports (over 4700 engineered pipe supports) to assist Construction team in planning fabrication/erection activities and Materials team to track shortages.

Dates : From Sep. 2014 till Dec. 2016

Employer : WorleyParsons Engineering Consultancy Company (WPECC)

Project : PP13 & PP14 1900MW Combined Cycle Power Plants (Saudi Arabia) / Saudi Electricity Company (SEC)

Job title : Mechanical / Piping Engineer

Job Description :

- Performed hydraulic calculations for the Condensate system to size the system's pumps and piping.
- Package Engineer for the Steam Cycle 620 kW Condensate Pumps (performed Requisitioning, Technical Bid Evaluation, and Vendor Document Review up until Final Inspection Release).
- Mechanical Package Engineer for the Severe Service Control Valves (Steam Turbine Bypass).
- Participated in over 20 HazOp sessions and formally facilitated 4 HazOp sessions for the Air Cooled Condenser (ACC).
- Package Engineer for the High Energy (Engineered) Pipe Supports package (including review of Vendor Pipe Support Fabrication drawings against 3D Model and Specs, manhour estimates, follow-up/coordination meetings with Vendor, etc.).
- Lead piping stress and support activities for all BOP piping (including isometric review, stress analysis, support selections, manhour planning, and scheduling).
- International Work Experience: Worked in WP China (Beijing) office on an assignment to train and establish a team of 13 piping designers/engineers to accelerate the delivery of piping deliverables for PP13 and PP14.
- Developed from scratch a detailed and controlled procedure for processing Special Pipe Supports information between Piping and Civil/Structural disciplines.
- Prepared design information for Civil team for all BOP Pipe Racks (over 20 pipe racks).
- Performed looping studies for all BOP piping outside the Power Block using CAESAR II analysis and simplified methods.
- Trained over 8 Saudi Electricity Company (SEC) junior Mechanical Engineers on basic Power Plant fundamentals and Heat Balance

Diagrams.

Dates : From Jan. 2013 till Sep. 2013
Employer : Chicago Bridge & Iron Company (CB&I)
Project : Longford Gas Conditioning Plant (Australia)
Job title : Mechanical Engineer
Job Description :

- Supported Lead in preparing Technical Requistion for API 610 Pumps (Amine Circulation Pumps, Hot Oil Pmps, LP and HP Flare KO Drum Pumps, etc.).
- Technical Evaluation of ANSI/ASME B73.1 Pumps' bids (Demineralization and Utility Water Pumps).
- Technical Evaluation of API 610 pumps' bids.
- Vendor Document Review.

Dates : From Jan. 2012 till Dec. 2012
Employer : Chicago Bridge & Iron Company (CB&I)
Project : Reficar Refinery Expansion (Cartagena, Colombia)
Job title : Piping Stress & Support Engineer
Job Description :

- Supported Stress Lead in planning man-hour estimates for stress activities.
- Supported Stress Lead in preparing Critical Line List.
- Stress analyzed, supported, and qualified-for-service water and chemical piping connected to Steel and FRP Tanks experiencing significant settlement (1.5 inches).
- Investigated cost-effective and efficient piping designs to achieve minimal loads on FRP Tank nozzles.
- Specified and prepared datasheets for Rubber Expansion Joints to be utilized on tank piping.
- Qualified Deareating Feedwater forwarding Pumps' Nozzle Loads per ANSI/HI 9.6.2.
- Specified and coordinated with Civil group requirements for special pipe supports.

Dates : From Jan. 2009 till Dec. 2011
Employer : Power Generation Engineering and Services Company (PGESCo)
Projects :

- Suez 1x650MW Steam Thermal Power Plant (Egypt)
- Ain El-Sokhna 2x650MW Supercritical Thermal Power Plant (Egypt)
- Abu Qir 2x650MW Subcritical Thermal Power Plant (Egypt)
- El-Tebbin 2x350MW Thermal Power Plants (Egypt)
- El-Atf 750MW Combined Cycle Power Plant (Egypt):
- Sidi Krir Units 3 & 4 (750MW) Combined Cycle Power Plant (Egypt)
- Nubaria III (750MW) Combined Cycle Power Plant (Egypt)

Job title : Piping Stress Engineer
Job Description :

- Prepared from scratch the Critical Line List for Abu Qir 2x650MW Subcritical Thermal Power Plant.
- Performed and/or Checked stress analysis of all Critical Piping Systems (Main Steam, Cold Reheat, Hot Reheat, Auxiliary Steam, and Boiler Feedwater) during FEED and Detail Design stages of projects.
- Performed Nozzle Load evaluations for Steam Turbines per NEMA-

SM23, Feedwater Pumps per API 610, Feedwater Heaters per HEI and WRC-107/297, and Large Storage Tanks per API 650 Appendix P.
- Performed Flange Load Evaluations using ASME Section III Class 2 piping method (NC-3658.3).
- Performed Hot Walkdowns and prepared walkdown reports for the Main Steam (or HP in Combined Cycle Plants), Cold Reheat, and Hot Reheat Systems.

Dates : From Jan. 2008 till Jan. 2009

Employer : Power Generation Engineering and Services Company (PGESCo)

Project : El-Tebbin 2x350MW Thermal Power Plants (Egypt)

Job title : Mechanical Engineer

Job Description :

- Managed the Mechanical Equipment and Piping Installation contract package (CP-118) including review of Vendor documents, handling correspondences and arranging for technical meetings.
- Prepared and updated Piping and Instrumentation Diagrams (P&IDs) for the main and auxiliary systems of the Power Plant such as Reboiler, Closed Cooling Water, Service Water, Raw Water, Lube Oil systems.
- Sized Closed Cooling Water and Condensate Pumps.
- Sized Service Air Compressors.
- Sized Normal and Emergency Drains (Piping and associated Control Valves') for the Plant's Feedwater Heaters.