Er. DuraiMariappan

DuraiMariappan.364534@2freemail.com

**MECHANICAL ENGINEERING**

Many significant project management achievements. Broad ranging experience covers the optimization of team potentials, liaising with internal and external stakeholders as well as operational management from, both practical and administrative standpoints in the worked areas.

**AREAS OF EXPERTISE**

● Project Engineering ● Pre- Commissioning ● Passive Fire Protection

● Project Planning Management

● Piping Engineering ● Hydro & Flushing

● Project Controls

● Quality Engineering

● Power Plant Engineering

● Thermal Insulation

● Site Management

● Production Engineering

**PROFESSIONAL EXPERIENCE**

**HYUNDAI ENGINEERING AND CONSTRUCTION, UAE,**

***Client: Emirates Nuclear Energy Corporation (ENEC)***

***Main Contractor: Korea Electricity Power Corporation (KEPCO) / (KHNP)***

***Project: Barakah Nuclear Power Plant (BNPP) 4 x 1400 MW (APR)***

**PROJECT ENGINEER (PIPING) September 2015 to Present**

* Planning, Execution, Control and Supervision of all activities like Hydroflushing, Pneumatic testing, Hydro testing, Watering, Dewatering, pressurizing and Depressurizing etc. pipeline of different material in compliance with project specifications, International codes, Project HSE plans and followed by a nuclear system procedure (ASME NQA-1, ASME Sec. III NB-6200 & NC-6220).
* Communicates and interfaces with other engineering disciplines, Coordination with Commissioning engineers (KHNP) and inspecting engineers (ANI) QA/QC and HSE team in the organization and those of clients (KEPCO/ENEC) for related activities.
* Verification of isometric drawing with respect to P&ID. Preparing the punch list items as per P&ID and Isometric such as, Pipe supports, Valves, Guides, Shoe support, NDT completion and approving/ releasing packages for hydro & flushing activities.
* Assures that all joints are exposed for examination during the pressure test. Confirm repairs, re-testing and re-inspection in accordance with specifications.
* Do line walk and final inspection in preparation for testing. Execution and inspection of hydro flushing, hydro test, pneumatic test and leak test.
* Check flange connections for leaks, if leaks are found, bleed off pressure, repair the leaks, and build up pressure again.
* Witnessing of hydro flushing, pneumatic test and hydro-test; system lay-up both in erection field.
* Preparation of pre-commissioning procedures like air blowing, Steam blows, water flushing, gravity flushing and lube oil flushing, etc., and carried out the same activities in the field.
* Perform the lube oil flushing of cooling water pumps, boiler feed water pump, boiler fuel gas recirculation fan, gas turbine, bog booster compressors, air compressor, oxidation compressors, C2 treated compressor and nitrogen make up the compressor.
* Conduct tightness test on each line system and verify the occurrence of leaks. Supervise the work prior to mechanical completion, assisted by commissioning support group.
* Making a re-instatement punch list and clearing the items. Witnessing of Flange joint assembly and bolt torque.
* Inspection of gaskets, supports, valves prior to line reinstatement acceptable as per the latest drawing for construction, codes and specification standards.
* Reviewing the approved quality plans, manuals and scope of work to perform the required inspection.Isolation Hand Valves have been set in positions specified by the checklist prior to the test.
* Verify that all instruments have been installed, tested and connected. Check pipeline hangers and supports for any damages and possibility for movement on sliding supports. Review of hydro test Package and check the limit of test pack. Confirm all valves are set to the pre test position shown in the system P&ID limits.
* All necessary blinds have been installed as per isolation plan. Confirm all spectacle blinds and temporary commissioning spades are in the pre test position shown in the system P&ID limits.
* Ensure direction and location of check valves do not interfere with pressuring or de-pressuring the system.
* Reinstall package and submit to pre-commissioning and commissioning activities.
* Ensure isolation and purging according to the safety procedure in case that systematically, facility or unit is subjected to maintenance or repairs.
* Perform mechanical run-in of pumps, blower, fan and associated equipment... Ensure plant safety regulations and company policies are adhered to including Permit to Work, Isolation and Depressurization Procedures.

**NAVSAR POWER SERVICES, INDIA,**

***Project: LARA SUPER THERMAL POWER PROJECT, 2x 800 MW***

**PROJECT ENGINEER (QUALITY) December 2014 to August 2015**

* Perform project Quality Assurance assignments requiring the application of standard techniques and procedures.
* Ensure that general project procedures are verified in accordance with the planned times and responsibilities assigned in the Project Quality Plan.
* Well experienced with Construction and inspection of pressure vessels, oil & gas power piping, boilers, equipment (rotary / static type), heat exchangers, offshore items like platform/Pile-head/pile-can/skids/structural.
* Prepare Quality Plan and Project Quality Procedures which guarantee compliance with contractual requirements and ISO Standards.
* Supporting the planning in all quality aspects and with regard of risk minimization.
* Prepare discipline activity plans for the QA/QC function and audit reports (internal and external), noting non-conformances and verifying effective corrective and preventive action.

**SRK ENGINNEERING WORKS Unit I & II, India**

***Company Profile: Boiler Accessories and Mountings (Pressure & Non-Pressure Parts) Fabrication***. (Economizer coil, super heater coil, heat exchange coil, reheated coil, Pressure Vessel, Storage tank, Ductworks, Chimney, Columns, Beams, steel structure… etc.)

**PROJECT ENGINEER October 2012 to November 2014**

* Reporting to Managing Director and General Manager. Holding daily interface meeting with discipline lead engineers.
* Preparation of Weekly Planning, Six weeks and 90 days rolling look ahead. Weekly Schedule presentation to Owner/PMC. Estimate, Plan, schedule, track & control (Construction, turnover, to commission) by Primavera.
* Review and integrate subcontractors Spread Sheet/MS Project schedule in line with the baseline and set to Primavera Target. Conduct earned value and critical path analysis, specifying KPI`s and efficiency rating of discipline and project phases.
* Weekly project data collection, compilation of appraisal guide, dissemination of progress report to the Projects/Owner/PMC. Collating information and documents from Engineering/Procurement and forecast activities/ fixing construction sequence as per DTS.
* Scope Verification and Control, Resource Selection, Cost Control & Valuation, Drawing Control and takeoff measurement. Organize conference call, explanation meeting, and liaison with client, consultant & subcontractors.
* Attending weekly coordination meetings with the client along with project manager and resolving the day-to-day problems arising in the sites.

**INTERNATIONAL THERMAL INSULATION AND FIRE PROTECTION, LLC – UAE, web: www.intherpro.ae**

**PROJECT CONTROLS ENGINEER December 2009 to April 2012**

**Projects:**

a) Habshan 5 Process Plant NGL Package - Abu Dhabi, UAE/ b) Shuweihat S2 WIPP - Phase 2, Abu Dhabi, UAE/ c) DEEP PANUKE PFC Project, Abu Dhabi, UAE/ d) BAB Gas Compression Project, Abu Dhabi, UAE/ e) Taweelah Exhaust System for Gas Turbines, Abu Dhabi, UAE/ f) Ruwais Refinery - Phase 2, Abu Dhabi, UAE/ g) Thermal Insulation & Cladding Work, for DLB1000 Exhaust Lines, Abu Dhabi, UAE … **etc**.

**Clients:** GASCO/ADEWA/ ENCANA/ZADCO/TAPCO/TAKREER/TECHNIMONT/KHARAFI NATIONAL/ JGC-CCIC/HAMCHANG/GPC/SBM OFFSHORE/SK ENGINEERING/AAF INTERNATIONAL/NPCC … **etc**.

**Profile:** Passive fire protection(passive fireproofing) for steel Structures, Concrete & Ductworks, Fire seals penetrations, fire stopping works, fire barriers, fire door installations. Insulation for hot, cold, acoustic, thermal spray insulation, cryogenic insulation, sound insulation, storage tanks, pressure vessels, pipe section & cladding works.

* Assisting in the in the development and expansion of the existing and improving engineering facilities.
* Execution of fireproofing, fire stopping/sealing, Hot, Steam & Heat Tracing, Cold /Cryogenic and Acoustic Insulation works. Execution of job as per the specification & Schedule.
* Ensuring that the job is moving as per the given schedule. Preparation of track records and updating database.
* Applied multi-skilled, liaising between both the internal and external. Contributing to strategy formulation and forward planning as a member of the management team.
* Initiating the project, defining project scope and preparing the project plan.
* Maintaining change controls. Identifying service needs, solving engineering problems relating to the continuous expansion of the project.
* Writing technical specifications and overseeing production of conceptual drawings, preliminary design criteria for the project, including Scope of Work, Work Breakdown Structure and general specification, milestone identification and planning (macro-level).
* Providing efficient and reliable buildings and engineering services for both clients and staff.
* Identifying and matching needs to approve the budget with project stakeholders. Identifying ongoing project risks and assigning and mitigating risks.
* Reporting project status at progress meetings. Resolved part and assembly discrepancies.
* Responsible for updating project progress to the management team and provide overall support for smooth execution of the project.
* Perform the tasks of preparing a project status report and update the status on a monthly basis to the General Manager.

**INTERNATIONAL THERMAL INSULATION AND FIRE PROTECTION, LLC – UAE, web: www.intherpro.ae**

**PROJECT SITE ENGINEER** **July 2008 to December 2009**

1. Project: Dubai Metro Rail Project, Dubai, UAE

Client: RTA

Main Contractor: JTMJV

Passive fire protection(passive fireproofing) for steel Structures & Ductworks, Fire seals penetrations, fire stopping works, fire barriers, fire door installations.

1. Project: Habshan Gas Complex Expansion, Abu Dhabi/UAE

Client: GASCO

Main Contractor: CCIC

Passive fire protection (passive fireproofing) steel structures, pipelines and racks. Insulation and cladding work.

1. Project: Onshore Associated Gases, Habshan Project, Abu Dhabi/UAE

Client: GASCO

Main Contractor: CCIC

Passive fire protection (passive fireproofing) for Pipelines. Insulation & Cladding Works.

* Surface preparation by using Blast cleaned by dry blasting in according the Steel Structure Painting Council (SSPC) & ISO & British standard BS 7079 and NACE (National Association of Corrosion Engineers)
* Corrosion control by Catholic Protection applying (METALLIZATION) (arc spray energizer machine).Corrosion Control by using Protective Coating according to NACE. Composition of Paint and it is Properties and Function Group of Paint (POLYMERS).
* Coating Application Methods, Visually Inspection Checks and Description Technical Data Sheet.
* Applying and Recording Inspection Instrument such as Weather Condition (ST, RH%, DPT), measuring of surface profile, measuring Dry Film Thickness (DFT) of the Painting.
* Prepare the procedure, method of statement, test plan and risk assessment.
* Check steel surface before starting blasting. Check equipment’s for preparation and application.  Check safety precautions.
* Using all kinds of painting materials such as: Zinc rich epoxy, zinc silicate primer, top coats, and zinc Phosphate, alkyd primer, polyurethane, high build epoxy and polyethylene
* Inspection for surface preparation of pipe, plates supports and tanks outsides and insides, vessels, heat exchange, all types of steel structures. Inspection of pipeline coating.
* Making inspection, fire proofing for all kinds of steel structure using different types of material cementitious material or Intumescent, epoxy material.
* Day-to-day operation and maintenance of project work, execute the specific inspections on materials, equipment and construction installation activities on the site.
* Issues the relevant Quality Records and, when necessary, write and send to Quality Control-QC Supervisor non- conformances reports, verifying conformity of the work to specified Quality Requirements and ensuring that the inspections and controls are carried out and documented in accordance with the Quality.
* Scheduling and coordination of inspection activities with client inspection team. Ensuring conformance to applicable codes and standards. Drawing up punch lists/exception items lists prior to project completion.
* Coordinated contractors, architects and other project team members to deliver high quality projects within specified time frames.
* Identified design, process and equipment options to satisfy client needs, minimize costs and limit potential operational problems. Maintained timely and accurate oral and written technical reports regarding assigned engineering activities.
* Oversaw and supervised a multi-national workforce. Involved in all aspects of insulation and cladding on the project, such as assessing, planning, permits, man management, material co-ordination and safety.
* Co-ordinate various work fronts pertaining to the insulation / coating side of the project, directing manning levels in different parts of the contract as required by the client.
* Planning material call forwards, Identifying lines and vessels to be insulated, marking up ISO drawings for percentage reporting and line walking.
* THERMAL INSULATION CODE & STANDARD
Thermal Insulation (Hot &Cold) according to international standard as ASTM (American Society of Testing and Materials)
* THERMAL (HOT) INSULATION MATERIAL
- (Rock/Mineral Wool & Mineral Fiber Blanket) nominal Density (128 kg/m3) and process Temperature up to 650 °C using for (Piping and Equipment). - (Calcium Silicate) Nominal Density (128 kg/m3) and process Temperature up to 650 °C using (Towers).
* THERMAL (COLD) INSULATION MATERIAL
- (Foam Glass & Glass Wool) nominal Density (120kg/m3) and process Temperature from (-70 °C to 100 °C) using for (Piping and Equipment).

**SRK ENGINNEERING WORKS Unit I & II, India**

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**PLANNING CUM PRODUCTION ENGINEER July 2007 to May 2008**

* Initiated statistical analysis project that resulted in sound recommendations adopted by the entire department.
* Managed numerous projects simultaneously within budgetary restrictions. Resolved part and assembly discrepancies.
* Collaborated with engineers and project managers regarding design parameters for client projects. Prepared structural framing drawings and required steel detailing for power plant projects.
* Ensuring all resources (manpower and materials), are provided as per the contractor's scheduled plan, meet all KPIs, and SLAs on time and within budget.
* Main involvement was on the operation and maintenance of main and auxiliary equipment associated with a large power plant accessory & mountings.
* Initiating the project, defining project scope and preparing the project plan. Conduct material inspection in accordance with the specifications.
* Scheduling and coordination of inspection activities with client inspection team. Drawing up processes to meet specific client’s needs &Conformance to applicable codes and standards.
* Representation to clients for inspection team and liaison with Vendors and Field Inspection Services. Daily work direction reviewing design drawings and engineering specifications.
* Drawing up punch-lists / exception item lists prior to project completion, making dimensional orientation and materials checks.
* Monitoring fabrication / welder’s works and ensuring procedures are adhered to.
* Materials & Cutting plan, prepare to issue as fabrication &To Inspect layouts and quality maintenance. Welder monitoring, procedure/welder qualifications
* To production program plan, schedule as review as customer &to divided load as contractors / documentation and continuous improvement as quality plan.
* Ensuring conformance to applicable codes and standards. Inspection of modules, jackets.
* Developed the contractor’s systems that ensured timely completions and integrity.
* Applied multi-skilled, general engineering and workshop practice ensured efficient operations to technical levels.

**PROFESSIONAL COURSES AND CERTIFICATIONS**

Graduate Bachelor of Engineering, MECHANICAL ENGINEERING 2003 - 2007

Certificate Anna University, India

HSC Higher Secondary, MATHEMATICS &SCIENCE 2001 - 2003

Certificate Government Model Higher Secondary School, Tamil Nadu, India.

**COMPUTER PROFICIENCY**

Professional in Project Planning Management Advanced

Primavera P6.0 -7.0 Advanced

MS Project Advanced

Auto-Cad Advanced

Cutting Plan Advanced