

BALAMUTHU MANICKAM.S

Date of Birth : 31st May 1972.

Nationality : INDIA

Qualification : B.E (Mechanical) – Bachelor degree in Mechanical Engineering from University of Madras, India, Year of qualification: 1993.

Passport Details : Z2834199 Issued in Kuala Lumpur, Malaysia on 23/02/2015 Valid up to 22/02/2025.

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**CAREER SUMMARY:**

- Graduate mechanical engineer with 23 years' of work experience in construction projects, plant operation maintenance, shut down maintenance covering large scale power projects, EPC projects, chemical industries, desalination facilities & plant utilities. Significant construction site management experience in domestic & international projects.
- A comprehensive experience in site fabrication & erection of steel structures, piping (HP & LP), large storage tanks, vessels, ducting, mechanical rotary & stationary equipment's, EOT cranes, firefighting system, HVAC, roofing & cladding works, blasting, non-steel piping, painting and thermal insulation.
- Knowledge in project execution planning, schedule preparation, budgeting, cost estimation, procurement, engineering documentation, preparation of technical proposals & queries. Liaison with client, contractors, sub-contractors and statutory authorities.

JOB TARGET :

- Project Manager (or) Site Manager related to industrial infrastructure, power, chemical, refinery, oil & gas (piping, steel structure, storage tanks, rotary equipment's installation construction activities and shut down maintenance).

Current Employment:-

Company : **TECHNOFIT SDN. BHD.**, No. 2&3, Jalan PPS-1, Pusat Dagangan Selaseh, 68100-Batu Caves, Selangor Darul Ehsan, Malaysia. **Tel:** 006036178 7848, **Fax:** 0060-36178 7883, **Email:-** technofit@technofit.com.my
 Business: *Mechanical & Electrical services provider for Construction and Plant Maintenance of Power, Petrochemical, Oil & Gas and Marine Industries.*

Period : From 08th July 2016 to **TILL DATE.**

Job Title : Construction Manager-Piping in SIEMENS Pengerang Cogeneration Project.

Project Location : PETRONAS Pengerang Cogeneration Plant Project, LOT 46, Project RAPID Area, 81600 Pengerang, Kota Tinggi, Malaysia.

Duties Performed : 1220 MW Combined cycle power plant HRSG, Steam Turbine, Water Steam Cycle, Auxiliary piping and Turbine internal IP/ LP /HP piping quantum around 60,000 inch dia. welding includes carbon steel, stainless steel, alloy piping (from P11 to P92) and sensing instrumentation tubing (Pipe size varies from DN 8 to DN1000).

- Administer for piping construction activities, manage and oversee the day-to-day management of piping scope of works are achieved in accordance with the contract requirements and timeframe compliance with client's specifications & established standards.
- Identify any potential or actual slippages day to day discussion with the Project Manager. Interprets drawings and specifications checking any deviations to ensure compliance with the Quality Assurance & control inspection plans and procedures.
- Daily coordination with Engineers, Quality Inspectors and Supervisor for all piping activities application of systematic work methods, standards and procedures and also ensures optimum interface of the various construction activities hydro testing, reinstatement, handing over to ECC for each test packages.
- Coordination with the planning personals starting and completion for each phase of construction and resolving priority deviations. Demonstrate personal commitment to Health, Safety and the Environment and complying regulations.
- Evaluation of capabilities of work team of members including machines and equipment's ensures all assigned duties are performed competently to achieve project objectives. Ad-hoc projects and duties as required by the management.

1. **EMPLOYMENT HISTORY:-**

Company : Petron Saudi Industrial Company L.L.C.,P.O. Box : 36895, Jubail Industrial City 31961., Kingdom of Saudi Arabia.

Period : From 24th February 2016 to 30th June 2016

Job Title : Project Manager

Project Location : Petro Rabigh-II Expansion – Ethane Cracker, Common Utilities & Tank Farm Projects. Address: Rabigh 21911, Kingdom of Saudi Arabia.

Client Details : Petrofac Saudi Arabia Limited., Al-Kobhar, KSA.

Duties Performed :

- Managing project, focal point to EPC contractor; ensuring piping work is achieved in accordance with planned contract requirements, in compliance with specifications, safety and quality. Interface systems and sub-systems in accordance with commissioning sequence requirements.
- Responsible overall leading piping erection activities at multiple strategic locations of the project viz. Air Separator Unit, Waste Water Treatment Plant, Solid & Liquid Incinerator Plant and Tank Farm Piping, total quantum of piping works around 40,000 inch dia of **CS, LTCS, SS, Monel & CuNi piping**.
- Day to day monitoring of piping test pack progress location wise focusing mechanical completion, NDT completion, pre-punching rectification, blowing/flushing/ cleaning, hydro/pneumatic testing, dry/wet lay up as per project specification up to reinstatement.
- Updating construction management by identifying key positions, establishing clear definition of responsibilities for the team personnel. Leads the inter-discipline coordination to ensure the smooth completion of all activities with minimum interruptions & reworks.
- Ensured continuous construction work fronts availability through preparation and review of look-ahead schedules, work front available and material delivery schedules. Constantly identify bottlenecks for progress and proactively take action to resolving the related issues.
- Chairs daily, weekly & monthly meetings, and ensures action points are liquidated in a timely manner. Ensures proper and timely hand over of systems / subsystems to commissioning teams, and provides assistance as required. Complete Lessons Learned workshops as each project progresses.

2. **EMPLOYMENT HISTORY:**

Company : Shin Eversendai Engineering (M) Sdn Bhd.. Malaysia.

Period : From 26th December 2012 to 17th December 2015

Job Title : Site Manager (BOP & Tanks)

Project Location : 1x1000 MW Coal Fired Power Plant, Tanjung Bin-4, Johor, Malaysia.

Client Details : Tanjung Bin Energy Issuer Bhd, Malaysia.

Project Execution Consortium Partners:- Alstom, Mudajaya & Eversendai.

Duties Performed :

- Responsible head, lead, managing the construction of balance of plant (BOP) section and large storage tank packages for 1x1000 MW Coal Fired Power Plant, Tanjung Bin-4, Johor, Malaysia.
- Successful completion of EPCC packages of large storage tanks (total 7 Nos. = 3 No's Mild Steel tanks & 4 No's stainless steel (SS316L) storage tanks) for storage of fuel oil storage, raw water, fire water, demineralized water, condensate and potable water requirements starts from foundation inspection, commencement of erection activities, stage inspection, testing, blasting, & painting at site and final handing over for commissioning..
- Storage tanks conceptual design with design calculation as per API650, detail shop drawings, liaise with consortium partners and clients for sharing interface design inputs, drawing finalization & getting design approvals, coordination with procurement for timely delivery of tank steel material for shop pre-fabrication, monitoring shop fabrication & site erection activities, overall packages monitor the progress to ensure that it follows the project planning and project execution plan.
- Coordination for auxiliary building steel structure & pipe rack steel structure engineering, interact with client & consultants for receiving design engineering inputs, feeding design inputs to engineering for detail drawing, shop drawings receipt & issuance for fabrication, monitoring fabricated steel structure material timely delivery to erection site and maintaining erection schedule.

Lead construction management of other BOP packages:-

- ✚ Erection of sea water intake (cooling water intake pump station stilling basin) with a flow of 200,000 m³/hr, the main cooling water intake pump station comprises 4 vertical mega Hyundai pumps model HH12400VKN, 50,000m³/hrx14.9 mtr Height x 227 RPM (Motor Model HRQ3 1255-98Y), Overhead crane steel structure to support a 10t & 50t twin hook gantry cranes and 10 ton semi-gantry cranes, steel piping including pump headers, reducers of Ø3800 x 800 meter length, filtration & screening plant with stop log gates, trash rake & bar screen, double flow band screen, chlorine injection system, utility piping and instrumentation.
- ✚ Erection of demineralized water treatment plants (having 2 x 75m³/hr production capacity), plant scheme comprises multimedia filters, activated carbon filters, cation & anion exchangers, mixed bed exchangers, back wash arrangement system, acid & caustic storage dosing system, drain water neutralization system and potable water production facility along with steel & non-steel piping.
- ✚ Erection of industrial water pump station comprise firefighting water pumps of electric drive & diesel drive, water treatment plant feed pumps, service water distribution pumps and boiler air pre-heater washing pumps. Erection of compressed air production & distribution systems facilities comprises compressors, air receivers & dryers along with piping& instrumentation.
- ✚ Erection of fuel pumping station to boiler along with fire–protection & detection accessories, foam station, pumps & strainers and water spray cooling arrangement for storage tanks.
- ✚ Erection of auxiliary package boilers production capacity of 50 tons steam / hour, exist with deaerator, steel chimney (45 meter height), chemical dosing system, continuous environment monitoring system, fuel oil burners and piping.
- ✚ Installation of fire water piping in BOP area, installing fire detection & protection systems and HVAC equipment's, erection of gas storage equipment's& distribution piping (O₂, CO₂, H₂& N₂ system), erection of waste water treatment plant, waste water discharge sump pumps, pipe rack steel structure including grating handrails and BOP piping network (steel & non steel piping like GRP, PP, HDPE, PVC & UPVC).
- ✚ Auxiliary building steel structure erection including roofing sheets, Erection of overhead gantry cranes (15 No's starts from 1 ton to 50 tons SWL).

3. EMPLOYMENT HISTORY:

Company : Cethar Limited (Formerly Cethar Vessels Limited), India
 Period : From 16th October 2009 to 24th December 2012.
 Job Title : Manager – Construction (Utility Power Projects).
 Project Location & Client Details : a. 2x150 MW CFBC coal fired power plant EPC work at Shree Cement Limited, Beawar, Rajasthan, India.
 b. Supply, Erection & Commissioning of 2x250 TPH CFBC Boiler's along with ESP at Jaypee Sidhi Cement Plant, Madhya Pradesh, India [Total erection package: 10500 MT].

Duties Performed:-

- Managing the construction of thermal power generating facilities for an EPC Contractor, identification of drawings PGMA wise, sequential erection planning according to the DU's. Allocation of engineers in various functional locations as per PGMA modules.
- Managing sub-contractor with regular review for progress planning, resource for execution and material follow up from production units, bought outs for completing the project task.
- Managing critical erections like boiler ceiling girders, steam drum, de-aerator, water cooled cyclones, RWWSH, preassembled post headers, coal bunkers, safety valve exhaust & other venting silencers, ESP, Ducting and ESP inlet & outlet funnels etc.,
- Lead erection of rotary equipment's Boiler Feed Pumps, PA, SA, ID Fans, Loop seal blowers, Drag chain feeders, Rotary Ash Coolers, BAC screw coolers, RALV's and erection of Air & flue gas ducts along with line dampers, actuators, boiler refractory application, insulation, roofing & cladding and painting activities completion as per schedule.
- Responsible lead for implementing all the safety and health related aspects in accordance with the client's needs and HSE standards. Implementation of Safety Work Permit System, wherever applicable. Monthly invoicing as per billing breakup / pro-rata & project mile stone.
- IBR Coordination for Ground inspections, Hydraulic tests, Safety valve settings and line charging approvals.,
- Commissioning coordination:- Refractory dry out, Alkali boil out, Acid cleaning, Rotating parts-(Fans & Blowers), DP Study of combustor & Bed ash coolers, ESP & Furnace air leak test, Steam Blowing and Safety valve floating.

4. EMPLOYMENT HISTORY:

Company : Angkasa Segi Sdn. Bhd., Malaysiaan ISO 9001:2000 and OHSAS: 18001 certified company.

Period : 06th March 2005 to 19th May 2009.

Job Title : Joined as Sr. Site Engineer and promoted up to Dy. Site Manager.

Project : • Fast track construction project - 3 X 700 MW Coal fired power plant at Tanjung Bin, Johor, Malaysia. Client: Ishi Power Sdn. Bhd. [a subsidiary of Ishikawajima-Harima Heavy Industries Ltd – IHI, Japan].

Client : • FELDA Palm Oil Mill Industries Ltd., Besout, Sungai, Ipoh, Malaysia.

Details : • Shut Down Maintenance for 3 X 700 MW Boiler – 1,2 & 3 (Annual) at Tanjung Bin Power Plant.

Duties Performed:

- EPCC work design & construction of large welded [low pressure-Fixed Cone Roof Type] storage tanks in carbon & stainless* steel for Service water [2664 KL – 2 Nos.], Light fuel oil [3177 KL], Dematerialized* water [2127KL – 2 Nos.] and Recovered Water [974 KL] [Total package: 500 MT].
- Erection of steel structures [pipe rack] for yard piping in auxiliary systems, stairways, galleries and cable tray structures [Total package: 1300 MT].
- Erection of BOP – Yard piping which include the system of service water, cooling water, boiler startup light fuel oil, compressed air, recovered water, waste water, auxiliary steam & Instrument air as per ASME B31.1 with applicable NDE inspections along with respective pump stations, pump stations maintenance monorail steel structures, electrical & manual hoists and other accessories [Total: 900 MT]
- Erection of Boiler ash handling system [Boiler bottom ash, ESP fly ash & Slurry ash], Fly ash conveyor to ash storage silo, Fly ash storage silo equipments & vehicle loading arrangement, Coal mill / pulverizer [pyrite] reject system, Bottom ash scrapper conveyor [submerged chain conveyor- SCC], Coarse ash conveyor in Economizer & RAPH [Regenerative air pre-heater] and Slurry ash pond piping. [Total: 3850 MT]. Insulation and painting work on BOP areas, commissioning & warranty assistants for all the erected systems.
- Shut Down Maintenance for 3 X 700 MW Boiler – 1,2 & 3 (Annual) at Tanjung Bin Power Plant :-
- Boiler burner modification work conventional burner to "Wide Range Type" for boiler unit # 2 and # 3,

each unit having 30 burners, modification work involves blasting & thermal spray coating on burner outer sleeve surface and installation of new concentration ring Ø 500 mm on inner sleeve of the burner, concentration ring involves extensive dissimilar metal [CS TO SS] welding and NDT tests, duration of the work involves for each boiler is 24 days.

- Coal yard dust suppression system piping modification and pump replacement works, carbon steel piping work of small bore to big bore about 1090 dia inch work.
- Waste water recycling work from FGD to coal yard, piping erection work .
- Annual maintenance work for Boiler units – 1, 2 & 3 Flue gas desulphurization system, repair / refurbishment of corroded gas duct dampers, repair / replacement of damaged accessories.
- RAPH – Main drive gear box field overhauling by dismantling and replacing critical high speed bearings.
- Boiler coal mill pulverizer vertical roller type – rollers reversing work and gear box dismantling for sending to maintenance workshops, after overhauling from workshop receiving and reinstallation, gear box weight 18 Ton, each boiler 5 pulverizer mills.
- ESP system inspection assistance, installation of additional louvers, insulations repair and reinstallation works.
- Ash handling system maintenance, submerged chain conveyor rollout work, reinstallation from rollout position, slurry pumps overhauling.
- Fabrication and supply of heavy duty carbon steel palm oil mill Sterilization fruit cages with moving roller arrangement [87 No's, various capacities 2.0, 5.0 & 7.0 Tons and about 135 M. Tons fabrication work] to Felcra Berhad., Malaysia.
- Fabrication & supply of high ways gantries steel structure work [46 Tons] with hot dip galvanization for Jurong Pier Road, Singapore for Traffic Signage's.
- FELDA Palm Oil Mill Industries Ltd., Besout, Sungai, Ipoh, Malaysia.
- Repainting work of 40 meter Ht X 2.0 meter dia. boiler chimney [3 Nos.] and truncated cone & chimney incinerator 1 meter dia X 20 meter height [4 Nos.], hydro jet water cleaning and 3 coat painting system.
- Repainting work of Kernel bunker 8 meter Length X 8 meter width X 10 meter height and horizontal effluent treatment tank of 2 meter dia X 10 meter length by hydro jet cleaning and 3 coat painting system .
- Civil footing, fabrication and erection of viewing platform 27 meter length X 5.5 meter height with curved roofing and hand railing works including painting work.
- Main production building and boiler house roof burlin, roofing sheets, wall burlin, siding sheets, translucent sheets on roof & wall replacement work and other canopy structure modification works.

5. EMPLOYMENT HISTORY:-

Company : Doshi Ion Exchange & Chemical Industries Limited, Chennai, India.

Period : 01stMay2004 to 28th February 2005..

Job Title : Project Coordinator.

PROJECT LOCATION, CLIENT DETAILS& DUTIES PERFORMED :

CHENNAI PETROCHEMICAL CORPORATION LIMITED, INDIA.

- De-bottle neck project of 9.0 MLD municipal sewerage water treatment systems (Tertiary Treatment Plant - TTP), conventional lime dosing to Ultra-filtration membrane system, product water from TTP utilized in refinery cooling water & boiler de-min water requirements. Warranty operation & maintenance of renovated TTP.

SEA WATER DESALINATION PLANT AT RAMANATHAPURAM, TAMIL NADU, INDIA.

- Renovation & revamp of 3.8 MLD sea water desalination (Reverse osmosis system) on BOOT contract for 7 years to supply drinking water to 296 villages.
- The renovation package includes replacement of RO membranes, electro-chlorinator to liquid chlorine dosing, sizing & installation of new high pressure sea water feed pumps, sea water intake pumps installation, pretreatment filtration & post-treatment system modifications.

6. EMPLOYMENT HISTORY:

Company : Intesco Asia Limited, Bangalore, India.
 Period : 1st December 2002 to 30th April 2004.
 Job Title : Manager (Projects)

PROJECT LOCATION, CLIENT DETAILS & DUTIES PERFORMED :**Anirox Pigments, Dhanbad.**

Feasibility study & detailed project report (DPR) of optimum size co-generation system by estimating production-process heat & power requirement and identification of energy losses in electrical system, compressed air, steam driers, oil fired process furnace etc...

Bhopal Municipal Corporation, Bhopal.

Estimation, improvement method study on municipal water pumping system efficiency & street light system in Bhopal city.

USAID project (US Agency for International Development) By Bechtel

Promotion of cleaner and energy efficient cities and industries in Asia through cluster wise energy efficiency improvement studies at Bangalore Peenya industrial units.

State Bank of India sponsored project for their clients.

Identification of energy efficiency projects & investment grade opportunities for SBI industrial clients in the state of Karnataka.

7. EMPLOYMENT HISTORY:-

Company : Kesoram Rayon (B.K. Birla Group of Industries), Kolkata, India Large scale integrated chemical plant, manufacturing viscose filament rayon yarn, cellophane paper, Sulphuric Acid, Carbon-disulphide, Sodium Sulphate & Sodium Sulphide,
 Period : 2nd April 1996 to 28th November 2002..
 Job Title : Joined as Assistant Engineer and promoted up to Dy. Manager for Technical development & project execution.

Duties performed:-

- Revamp of 7.0 MW co-generation power system - High pressure boiler and condensing cum extraction turbine. Installations of low pressure economizers at flue gas exhaust at 2 X 25 TPH boilers. Installation of boiler high pressure feed water heaters before economizer in (2 X 25 TPH boilers) for enhancing co-generation power.
- Installation of cellophane paper dryer waste heat recovery (2,500,000 kCals/ hour). Cooling tower modernization work, conventional cross flow cooling tower to counter flow cooling tower for refrigeration plant & power plant systems.
- Water conservation - water recovery piping work from cooling tower overflow and other process spent water to factory main reservoir. Erection work of sulphur recovery system in carbon-disulphide production process.
- Rayon viscose process modification dry-churn to wet churn system. Installation of process waste heat recovery system in sulphuric acid plant, rayon process & sodium sulphate process.
- HVAC false ceiling work for optimizing of refrigeration, chilled water distribution system optimization / modification work, optimization of utility & common areas pumping system.
- Maintenance & major shut-down activities in cellophane paper plant, sulphuric acid process & other utility systems.

8. EMPLOYMENT HISTORY:-

Company : Separation Engineers, Chennai, India. Industrial Services in Commercial

Building, Cement, Engineering, Food, Iron & Steel, Paper and Textile Sectors.

Period : 10th March 1994 to 28th March 1996

Job Title : Mechanical Engineer

Duties performed :

- Industrial Services in Commercial Building, Cement, Engineering, Food, Iron & Steel, Paper and Textile Sectors. Visited wide spectrum of industries all over India.
- Operation & maintenance of waste water treatment plants.
- Cement industries performance evaluation work, centrifugal fans efficiency testing, estimation of process mass & energy balance, cyclones/ pre-heaters thermal efficiency, Thermal efficiency of kiln & cooler and performance evaluation of mill section, grinding etc.,
- Energy efficiency & cost reduction methods in commercial building, paper plants, cement industries, engineering industries, textile process, food and steel industries.

KEY QUALIFICATION:-

- Resource planning & project progress monitoring, knowledge & understanding of erection, fabrication, piping isometric, process & instrumentation drawings, on drawing basis ability to estimate, erection planning, erection sequence, erection man days, completion schedule, construction machineries & tools requirement.
- Ability to handle fabrication shop individually, plan and execute fabrication according to project schedule and maintain quality as per project requirement.
- Knowledge in various welding procedure specifications - WPS, welding procedure qualification records – PQR, welders qualification test – WQT and design & construction codes of piping & welded steel large storage tanks.
- Knowledge in preparation of project schedule, preparation of erection manuals / method statement, preparations for heavy lifting procedures, various pipeline pressure (Hydrostatic & pneumatic) testing procedure methods and tanks vacuum box leak test, diesel leak test, nozzle reinforcement pad pneumatic test, full water leak & settlement test.
- Knowledge of International standards ASME, ASTM, API, ANSI. Assistance to costing & scheduling department, Coordination with third party QA-QC inspection in various stages of erection, fabrication & testing, pre-commissioning inspection walk downs, site works conformance filing documentation, punch list defect clearance rectifications, participation in commissioning activities and regular coordination with clients for progress planning, discussion and shut down work planning & control of schedule.
- General safety in construction activities, safety awareness creation, tool box meeting talks of safe rigging, safe lifting, safe material handling in erection, personal protective equipment, working safe at height, fire protection & extinguishing methods, safe hand tool usage, coordination with safety personals when critical erection appears, knowledge of work permit system, work permit control system, hot work & confined space work permit system, safety walk downs, safety integrity assessments and hazard severity methods.
- Knowledge of process calculations in thermal system, heat & mass transfer, process energy & mass balance and performance evaluation of utility equipment's, process engineering input to tenders in the form of process descriptions, writing of technical appraisals, calculation of utility requirements and process guarantees.
- Knowledge of utility equipment's, boiler, compressor & HVAC systems and hands on experience in plant maintenance & utility systems.

EDUCATIONAL QUALIFICATION:-

- Bachelor Degree In Mechanical Engineering, 1989 – 1993 From Sri Venkateswara College Of Engineering, Sriperumpudur, University Of Madras, India.
- Qualified Energy Auditor in the year 2004 (First Batch National Level Energy Auditor Certification), conducted by, Ministry of Power, Bureau of Energy Efficiency, Govt. of India.

