**NAGARAJ KUMARASAMY**

**Mechanical Engineer Oil and Gas Refinery /Power Plant Pre-Commissioning, Commissioning/Operation (DCS and Field Operator)**



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**CAREER SUMMARY**

**16 Years Experience** in the field of Oil and Gas, Refinery / Power Plant Pre-Commissioning, Commissioning/Operation (DCS & Field Operator)

**(11 Years Experience in India and 5 Years Experience in Overseas)**

**OVERSEAS EXPERIENCE detailS**

From Nov 19 to till the date **Mechanical Pre-Commissioning Engineer**

**M/s. ENTER ENGINEERING PTE LIMITED. UZBEKISTAN**

Designation : MECHANICAL PRE-COMMISSIONING ENGINEER

Client : UZBEKISTAN GTL PLANT

**Scope of excellence covers:**

* **Synthesis gas unit**
* **Fischer-Tropsch Synthesis unit**
* **Air separation unit**
* **Air and nitrogen system**
* **Chemical storage unit**
* **Fuel and flare system**
* **Raw water and wax treatment unit**
* **Steam and condensate system**
* **Power generation and cooling water system**
* **Condensate fractionation unit**
* **Crude oil pumping station**
* **Product storage and export unit**
* **Effluent treatment system**
* **Process effluent bio-treatment unit**
* **Fire fighting system**

**Responsibility of Oil and Gas/Refinery Commissioning Activities:**

* Pre-Commissioning & commissioning activities those includes activities like flushing , Air blowing, leak testing,Drying,N2 purging, System mark-up PID chemical cleaning, making isolation as per process requirement by providing spades, oil flushing etc.
* Installation and testing of mechanical stationary and rotating equipment’s in the plant (Booster pumps, compressors)
* Familiar with oil manifold chokes, Handling HP, MP& LP separators (2&3 phase).
* Demulsifier, PPD& Corrosion Inhibitor injection rate calculation.
* Produced Water Tank, Skimmer Tank, produced water flash drum, knock out drum handling.
* Pig launching and receiving (foam, scraper, cup and intelligent).
* Motor driven compressor, Reciprocating compressor furnace,N2 package,Inst air system, hot oil system, production well heads ,injection well heads, Condensate Stabilizer, High Pr. Diff. types Pumps, HP & LP Separators etc.
* Crude transfer pumps, Booster pumps, Main pumps handling and Trouble shooting.
* Water draining and operation of all motor operating valves at Crude Oil Pumping Station.
* Checking and testing all alarms and trip switched with the instrument technicians.
* Troubleshoot and overhauling the rotating equipment for centrifugal pumps, positive displacement pump, centrifugal and reciprocating compressors, gear box, air fincoolers and cooling towers in oil and gas, petrochemical plants.
* Familiar with different types of valves, like **PCV, LCV, FCV** controller and transmitters.
* fuel Gas purging, filter and strainer cleaning etc.
* Pertaining to Safe Operations of the Unit & operating the equipment’s as per standard operating procedure (**SOP**), Fin fan coolers, Cartridge filter and Activated carbon filter, Steam ejectors etc., Handling of utilities like **LP,MP,HP steams**, nitrogen, instrument air, plant air, service, cooling, DM, BF Water etc.,
* Gas compressors Inter-Stage Scrubber gas treatment glycol contactors, glycol regeneration unit, Gas exports, Routine sampling of oil, gas, glycol and condensate.

From April 16 to Nov18 **Mechanical Commissioning Engineer**

**M/s. HYUNDAI HEAVY INDUSTRIES CO., LTD. KSA**

Designation : MECHANICAL COMMISSIONING ENGINEER

Client : Saudi Electricity Company (**SEC**) – **Kingdom of Saudi Arabia.**

Boiler : Once Through Super Critical Boiler (MHI) 256bar 2214 T/H **DFO,** **HFO/HCO** Fired

Turbine : Alstom Make

Generator : 60WT23 Hydrogen cooled

Units : 2880MW (4 x 720Mw)

**Responsibility of Power plant Commissioning Activities:**

* EPC projects Pre – commissioning and commissioning of Boiler, STG, BOP and Auxiliaries through DCS and Field. Excellent knowledge in P&ID diagrams.
* Responsible for continuous, safe and efficient Plant operation for Rotating and Static Equipment through **DCS & Field**. Responsible of Pre commissioning and Commissioning Activities for Boiler Systems.(Like, Boiler Circulating Pumps &
* ID,FD,GR Fans. BOP areas (Like **Jetty marine** **, Chlorination Plant, Demi/Desal Plant** and FGD(Flue Gas Desulfurization)
* **Jetty Marine** to **HFO/HCO** Tank farm area Pipeline and heat tracing line Commissioning.**Jetty area Unloading arm** Pre- Commissioning and Commissioning Activities **Jetty Slope oil tank servicing and safe Oil unloading Operation from the vessel.**
* Corner Firing of **DFO/HFO/HCO** Burner system Commissioning and Operation.**HFO/HCO** Fired Burner management system for Once through Supercritical Boiler Pre-Commissioning/Commissioning activities. Responsible for Motor Solo run & Mechanical run test.
* Pre commissioning and commissioning of deaerator ,condenser, vacuum pump, ejector, heater (APH/RAH/GGH) Responsible of Pre-Commissioning and Commissioning Activities for Boiler Feed Water Pumps, GR FAN, FD FAN, ID FAN. Refractory Dry out and Steam blowing Activities.
* Analysis of all process parameters in the plant for efficient & effective operation.
* Analysis of tripping & trouble shooting for Preventive Measures.Plant trouble shooting – Failure of boiler accessories, Failure of TG accessories. Trouble shooting of Ash handling and Fuel handling systems. Mechanical oversight: flushing / blowing the piping and equipment.
* Supervise the alignments, mechanical revision and vibration tests.Test the power device by device prior to delivery to the client.Ensure inspection mechanical completion of the equipment and eliminate the instance reserves.Trouble shooting the process and corrective actions to improve quality
* Supporting to plant improvement by learning new techniques and process activities
* Respond in the analysis and solution of commissioning and Pre-commissioning problems.
* All Mechanical isolation and normalization for the Start-up & Shutdown of Plant Auxiliaries.
* Maintaining the system sequencing during peak hours. Clear ECC & SRCC punch point for final handover, to maintain the project Documents. Co-ordinate with Client Final Inspection Activities.
* Co-ordination with subcontractors & clients for technical clarifications and Updating of day to day activities of site.

From Aug 13 to Sep 14 **Senior Commissioning Mechanical Engineer**

**M/s. TROPIK WOOD INDUSTRIES.** Fiji, Island

**Responsibility of Commissioning Activities:**

* Excellent knowledge in P&ID diagrams.
* Responsible for continuous, safe and efficient Plant operation for Rotating and Static Equipment through **DCS & Field**. Responsible of Pre commissioning and Commissioning Activities for Boiler. (ID, FD, BOP and ESP Responsible for Motor Solo run & Mechanical run test.
* Modification, Repair and Erection of Boiler air pre-heater and **Oil burner systems** **DFO**

Analysing the Performance of the Air pre-heater and Boiler, Commissioning Mechanical PTW execution Mechanical and piping isolation/ pre- Inspection Technical safety compliance for Mechanical

Coordination with operation/Construction/HSE team

**EXPERIENCE detailS IN INDIA**

From Jan 19 to Nov 2019 **Self Service Engineer/Commissioning Assistance - Chennai**

**Responsibility of Commissioning Activities:**

* As a Service Engineer/Commissioning Assistance of Pre – commissioning and commissioning of AFBC/CFBC/PC/Supercritical Boiler, Coal/Oil fired, **HFO/HCO** fired, Combined cycle power plant.
* Commissioning of Oil Burner systems **(DFO/HCO/HFO)**
* STG, BOP and Auxiliaries, Conducted PG Test.
* Responsible for Continuous safe operation through DCS & Field.

**Previous EXPERIENCE details in india**

From Aug 13 to Mar 16 **Senior Commissioning Mechanical Engineer**

**1. M/s.Avant-Garde Systems and Controls Pvt Ltd, Chennai, Tamilnadu, India.**

From Sep 11 to Aug 13 **Commissioning Mechanical Engineer**

**2. M/s.CETHAR LIMITED, Tiruchirappalli, Tamilnadu – India.**

From Aug 09 to SEP 11 **Commissioning Engineer**

**3. M/s.VEESONS ENERGY SYSTEMS (P) LTD, Tiruchirappalli, Tamilnadu – India.**

From Nov 04 to Apr 06 **Commissioning Engineer**

**4. M/s.THERMAL SYSTEMS (HYDERABAD) PVT LTD. Hyderabad – India.**

From May 01 to Nov 04 **Commissioning Mechanical Supervisor**

**5. M/s.CETHAR LIMITED, Tiruchirappalli, Tamilnadu – India.**

**DUTIES & RESPONSIBILITIES**

* **Stage inspection** of Vendor Materials and Bought out Materials. Preparation of **Erection & commissioning Schedules**. Conducting **reviews** with vendors on Erection progress Based on schedules. **Stage inspection** of Erection and periodical reviews. Inspection of Welding Quality and **IBR Formalities**. Site Co-ordination with Client and Vendors. Checking of **Piping routing, valves, supports as per P&I Drawings**
* **Pre-Commissioning activities of boiler & burner system, steam turbine system of Thermal power plants. Commissioning of PC Fired Boiler DFO/HCO/HFO burner System**-commissioning and commissioning activities of **air draft & flue gas path system**.
* Pre-commissioning and commissioning activities of **Electrostatic precipitator**, **FGD, ash handling system**-commissioning and commissioning of general equipment like **fans, blowers, compressor, pneumatic and hydraulic system** commissioning and commissioning of **deaerator ,condenser, vacuum pump, ejector, heater (APH/RAH/GGH),conveyor(pneumatic type/belt type)**
* Pre-commissioning and commissioning activities of **BOP systems**. **Commissioning activities like lube oil flushing, water flushing, air blowing, chemical cleaning and steam blowing.** Checking of **starting permissive and trip logic of Power Plant**. **Cold Start up and Hot Start up of Boiler and turbine**. Responsible for continuous, safe and efficient Plant operation through **DCS & Field.**
* Writing **reports and** Documentation. Analysis of all process parameters in the plant for efficient & effective operation. Handled major and **critical - Operation and maintenance** jobs of boiler in a systematic and efficient way Analysis of **tripping & trouble shooting** for Preventive Measures.
* Plant trouble shooting – Failure of boiler accessories, Failure of TG accessories. Trouble shooting of Ash handling and Fuel handling systems. Conducting **Performance Test** for the Plant.

**AcADAMIC QUALIFICATION**

* **Bachelor of Mechanical Engineering** from **Anna University with First class (2006-2009)**
* **Diploma in Mechanical Engineering** from **DOTE with First class (1998-2001)**
* **SSLC** from State board of Education **(1997-1998)**

**Personal dETAILS**

Name : Nagaraj Kumarasamy

Date of Birth : 01-06-1983

Nationality : Indian

Marital Status : Married

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Languages Known : Tamil, English, Hindi and Telugu

Passport Number : M3800704

Place of Issue : Tiruchirappalli

Issue Date/ Expiry Date : 19.11.2014 / 18.11.2024

Skype mail ID : nagaraj.kumarasamy

DECLARATION : I hereby declare that the above written particulars are true to the best of my knowledge.

Yours sincerely

NAGARAJ KUMARASAMY