

# Elijah Shanmugam

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Achievement-oriented professional in power projects planning, erection, commissioning, and operation, with more than 40 years of experience who has an entrepreneurial mindset to meet the expectations of project stakeholders.

Experienced in handling and completing highly valued multiple diversified Power & Infrastructure projects (including EPC) planning, Heavy & Pre-Engineered Building Steel Structures Fabrication, contracting, Erection, and commissioning. Currently looking for senior-level assignment in project management, Steel fabrication, construction, erection, and plant operations with an organization of high repute who preferably oriented in projects related to power, oil and gas, petrochemical, and civil infrastructure.

## Skills

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Construction & Erection	Labor Management	Resource Management
Testing, Commissioning	Risk Assessment	Projects Management
Resource Planning	Risk Mitigation	Cost Control
Technical Planning	Contract Management	Budget Management
Commercial Operations	Critical Thinking	SAP & ERP
EPC Projects	Decision Making	Contract Negotiation
Collaborative Leadership	Quality Mngt. OHSE	Interpersonal Communication

## Summary

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- Senior power plant professional, having 40 years of experience in spearheading the entire power plant project planning, project management, Heavy & PEB Steel structures fabrication, construction, erection, commissioning, and operation functions.
- Achieved successful completion of multiple (EPC) power projects and milestones within derived time and cost plan across hydro and thermal power plants, Petrochemical–Ethane cracker plant, large civil infrastructure buildings, WHR Boilers, and De-SOx Systems
- Successful completion of civil construction projects like administrative buildings, water storage ponds, roads and drains, health centers, and fire stations
- Adept in Steel fabrication, Erection & Construction projects like larger closed coal storage yards, RCC coal wagon tippers, conveying system blocks, RCC powerhouse buildings, effluent treatment, water treatment's civil and mechanical systems, electrical switchyard buildings in thermal & hydro power plants, across India.
- Highly effective in finalizing project estimation, resource planning, procurement coordination, supplier end coordination for timely materials receipt, vendor development, contract management, and construction tendering.
- Excellence in preparing project scheduling, budgeting, cost control and inventory control, team communication, Quality, and commercial management, site construction, and resources management to deliver within the desired Time and Cost
- Implemented & achieved ISO standards of Safety and environment
- Rich experience in successfully delivering end-to-end project management service including engineering coordination, liaising with state and central government authorities for obtaining statutory approvals, clearances, and license.
- Experienced in managing multiple projects simultaneously with competent cross-functional skills in executing multi-disciplinary activities as well as ensuring on-time deliverables in coordination with internal and external stakeholders.

## Notable Achievement

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- Successful budget and project controls to ensure the completion of projects within the cost and time desired.
- Steel structures fabrication, Construction, erection, and commissioning of 2x15 MW (Hydel Power), 6 x 210 MW (PC), 2 x 150 MW (CFBC), 2 x 300 MW (PC), 5 x 150 MW (CFBC) power projects
- Record time Construction, Erection, and commissioning of 2x150 MW (CFBC) (synchronization in 21 months for unit 1 and 26 months for unit 2).
- Heavy Steel structures fabrication, Construction and commissioning of 5x150 MW (CFBC) Boiler with 4x93 MW TG Plant in 30 months
- Effective leadership and coordination in securing Statutory Approvals, Govt. Clearance from CEA, Environment Department, Directorate of Boilers, Inspector of Factories, and Local Bodies for obtaining statutory clearances.
- Effective Risk Assessment and Risk Mitigation measures implementation in projects
- Successful in implementing and improvising OHSE Safety standards and procedures with near “Zero Incident” safety record and in evolving and implementing Quality Management Systems
- Managed Operations of 4 x 210 MW Lignite Fired Power Units in NLC Ltd., at Neyveli, Tamilnadu, India.
- Efficiently and successfully executed emergency (short-term critical) shutdown jobs to restore full load operations.

## Experience

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### **Engineering Consultant (Power & Steel projects operation)**

*Nov 2023 – Till now*

#### **Plant Head of PEB Steel Structures manufacturing Unit (Till 31.12.2024)**

- Headed Heavy & PEB Steel Structures manufacturing Plant Project development & Installation with complete Electrical Systems & Civil Infrastructure, Engineering Evaluations, Business Plans, Operations involving construction, erection, testing, commissioning, troubleshooting, PEB steel structure fabrication operations, and performance enhancement.
- Plants are operational in compliance with quality and safety standards, norms, and procedures.
- Project budget & Cost management & Control, Resource Planning & Optimization, Statutory compliance,
- Conduct operational training and skill assessment and development.

### **Head of External Services (Construction and Commissioning) - Dynepro Private limited - Tiruchirappalli**

*Jun 2021 - Nov 2023*

- Headed various functions involving Civil construction, Heavy Steel Structures fabrication, erection, commissioning, retrofit modification of FBC, WHR Power plants (Boilers, turbines, and auxiliaries, electrical and instrumentation), and De-Sox Systems of various projects.
- Finalize every project's estimation, resource planning, Fabrication, Erection and project schedule.
- Draft and finalize the project's bid for construction tendering. Negotiate with all parties and finalize the contracts for each project as Business Profit Center Head.
- Regularly reviewing to ensure successful and Timely smooth completion & commissioning of the projects by monitoring all project's effective safety, quality, cost, and timelines execution

### **Projects**

- 2 Units of 33.8 TPH; 89 KSc; 515-degree Celsius SH temperature coke oven WHR Boilers at Hosapet), Karnataka
- 2 Units of 66.7 TPH; 102 KSc; 535-degree Celsius SH temperature coke oven WHR Boilers at Jamuria, West Bengal
- 2 Units of 135 TPH; 110 KSc; 535-degree Celsius SH temperature Travelling Grate Boilers (Retrofit) at Karnataka & Maharashtra
- 1 Unit of 45 TPH; 68 KSc; 490-degree Celsius SH temperature FBC Boiler at Raipur, Chhattisgarh
- 1 Unit of 16.5 TPH; 67 KSc; 490-degree Celsius SH temperature FBC Boiler at Vapi, Gujarat
- 1 Unit of 9.8 TPH; 25 KSc; 280-degree Celsius SH temperature WHR Boiler & 1.5 MW TG at Sriperumpudhur, Chennai
- Flue Gas De-Sulphuration system involving limestone preparation and dense phase conveying system in Jaggaipet, Telangana
- 2 Units of 66.7 TPH; 102 KSc; 535-degree Celsius SH temperature coke oven WHR Boilers at Sambalpur, Odisha

### **Vice President - Reliance Industries limited - HMD, Hazira**

*Oct 2014 - Mar 2020*

- Developed project baselines, monitored, and controlled projects concerning cost, resource deployment, time overruns, and quality compliance to ensure timely execution of power plant, ethane cracker plant, ETP, and RWTP projects.
- Managed civil infrastructure building construction of Larger administrative office blocks, medical center, fire station, health center, and industrial canteen.
- Headed the completion of 6000 MT Steel Fabrication, erection and commissioning of Coal Based Captive Power Plant having 5 x 500 TPH Boilers and 4 x 100 MW TGs
- Managed project completion under EPC and Cost-Plus contracts within the time and cost parameters with effective resource utilization to maximize the output for timely delivery
- Facilitated technical and commercial negotiations with supplier's pre- and post-award selection of subcontractors.
- Leadership in project meetings for evaluating project progress,
- contingency plans, risk mitigation, recovery actions.
- Provided technical inputs for timely resolutions of engineering issues.
- Coordinated with all stakeholders including engineering consultants, procurement, subcontractors, and discipline leaders, to provide progress updates and facilitate the resolution of issues on time.
- Developed strategies to comply with budget goals.
- Developed and reviewed contractor's change order proposals and submissions to contain the project cost
- Effectively identified and communicated the risk aspects and mitigation plans as per project procedure
- Conducted regular site inspections to evaluate erection methodology and troubleshoot the problems occurring due to various erection activities for a tangible contribution of accident-free and fault-free erection and followed a healthy, safe, and clean working environment
- Successfully ensured near "Zero Incident" safety record throughout the project cycle

### **Project**

- Steel Fabrication, Construction and commissioning of a coal-based captive power plant for:
  - 5 x 150 MW CFBC Boilers
  - 4 x 93 MW STGs with 4 Nos FD cooling towers.
  - 220 KV/33 KV/6.6 KV SF6 gas-insulated switchyard with 2.4 KM long 220 KV underground cable transmission.
  - 1380 TPH coal handling, 265 TPH ash handling, and 140 TPH limestone handling systems

- 2 x 220 M chimneys
- Petrochemical ethane cracker plant of 80 MT/Hr capacity
- 1500 M<sup>3</sup>/Hr raw water treatment (augmentation) plant
- 600 M<sup>3</sup>/Hr effluent treatment plant

#### **Milestones**

- Successful construction and commissioning of a Coal-based (CFBC) captive power plant in 30 months with a schedule saving of 6 months.
- Land development of 20 Acres Back-filled area of back-water marsh riverbank with 2.5 Lac Cu.M dredged sand (through river sand dredging operation) & 3.57 Lac MT of Iron Slag within 10 months
- 2 km River Side Shore Protection with sheet piling, completed in 12 months, on back-water logging riverbank area with 4 months schedule saving.
- 5 KM bitumen top road and 2 KM RCC road laid & related drains within 12 months on backfilled and developed Land.
- Utilizing peak workforce of 9200 with the best HSE & IR/HR records
- Executed technical planning and proposals and cost estimates for 5 Lac Cu.M Water Reservoir
- Non-explosive demolition of 18 No's of seven stories residential apartments among school and residential buildings

### **Additional Vice President - Cether Limited - Tiruchirappalli**

*Nov 2009 - Oct 2014*

*Successfully delivered project and achieved all set targets within the desired time and cost through.*

- Headed Installation of Two Mega Power Projects, liaising with statutory bodies like the State's Electricity Department, CEIG, Director of Boilers, Inspector of Factories, Labour Welfare Authority, and other govt. agencies for obtaining required permits, approvals, and clearances on time
- Quick mobilization of contractors, workforce, machinery, and materials and adopting time-saving erection methods
- Steered construction of civil structures of Power Plant of 70000 M<sup>3</sup> RCC and 25000 M<sup>3</sup> PCC
- This includes 30 cells each of India's biggest two air-cooled condensers, a coal receiver block comprising 12000 Cu.M RCC, and 5000 MT PCC
- Construction of Large powerhouse buildings, effluent treatment, water treatment, civil and mechanical systems, electrical switch-yard buildings, including 4000 MT Steel Structures Site Fabrication.
- Played a key role in achieving records of Synchronization of the first unit in a record time of 21 months from scratch and the second unit in 26 months.
- Delivered a total load generation capacity of 300 MW in 30 months.
- Completion of successful performance tests for both units within 3 months of FL attainment
- Successfully conducted Safety Audits by the National Safety Council and implemented safety norms and recommendations.
- Received Letter of Appreciation from the customer for completion of project in record time
- Effectively managed 2100+ (skilled and semiskilled) workforce.

#### **Projects**

- Contributed as Project Manager for executing engineering and procurement coordination, construction, and commissioning (EPC) contract job of the 2 Mega Power Projects
- Nov'09 to Mar'13 - 2x150 MW (CFBC) Shree Mega Power Project (Civil, Boiler, BOP, and E-BOP) of Shree Cement Limited, Beawar, Ajmer, Rajasthan. Completed the project which was worth INR 600 Crores and efficiently managed peak workforce of 2100 (skilled and semiskilled)
- Apr'13 to Oct'14 - 4x300 MW (PC) Mega Power Project (Civil, BTG, BOP, and E-BOP) of SKS power generation (Chhattisgarh) Limited, Raigarh which was worth INR 3600 Crores and efficiently managed peak workforce of 2800 (skilled and semiskilled)

## **Additional Chief Manager - Neyveli Lignite Corporation Limited - Cuddalore**

*Aug 1986 - Nov 2009*

- Steered technical planning, project management, and construction planning of 2x210 MW- (Phase I with Franco Tosi Turbines) from Aug 1986 to Sep 1989, including 10000 MT Steel Structures Site Fabrication
- Construction, erection, commissioning, performance testing, and efficiency enhancement of 4x210 MW - (Phase II with BHEL BTG) from Oct 1989 to Sep 1996
- Managed operations & maintenance, of 4x210 MW-BHEL BTG and auxiliaries from Oct 1996 to Nov 2009

### **Highlights**

- Effective coordination in securing statutory approvals, Govt. clearance from CEA, Environment Department clearance, Inspector of Factories, and local bodies for obtaining Statutory clearance.
- Technical coordination with consultants, BHEL, EVT, and other suppliers for completion of engineering inputs
- PLF (Average) by more than 87% with Lignite (low quality) as Fuel and Improvements in various modules done to gain 5% PLF.
- Successfully deployed Safety, Health, Medical & Firefighting systems as per OHSE policies for the project and power plant
- Completed the construction, erection, and commissioning of 4 x 210 MW STG construction ahead of the revised schedule.
- Completed much-needed fast reconstruction work of 850 MT of coal handling structure and 2 KM length Lignite conveyor belt in 25 days that was damaged in a fire accident-causing a total of 1470 MW generation loss.

## **Site Engineer - Turnkey Constructions - Chennai**

*Jan 1986 – Jul 1986*

- Managed the erection of 2 X 15 MW Bulb type Hydro Electric Turbines for TNEB at lower Mettur Hydroelectric Project
- Turbines were Supplied by Fuji Electric Company, Japan

## **Site Engineer - ABY Pipes and Insulations - Chennai**

*Aug 1984 – Dec 1985*

- Successfully laid 4 KM length Oil Transfer Pipes - underground and overground pipelines
- Implemented application of anti-corrosive wrapping and coating for underground pipes. Installed insulation for pipes running above ground at Chennai Refineries Limited, Chennai

## **Education**

**Government College of Engineering, Salem**

*1984*

**Bachelor of Engineering (Mechanical Engineering)**

## **Languages**

English - Expert

Hindi - Proficient

Tamil - Expert

Telugu – Proficient

## **Soft Skill**

MS Office, MS Project, Primavera, SAP, ERP