

Abstract

Nigeria is a country which is witnessing rapid industrialization leading to high power demand. A country blessed with rich natural resources of crude oil and gas is fuelling increased installation of Gas based power plants. Oando PLC is Africa's largest energy solution provider company. They awarded 11.6 MW power plant project to M/s. Sterling and Wilson Co Gen Solution Pvt. Ltd in Jun'12 on EPC basis through local channel partner in Nigeria.

Introduction

The purpose of this project was to supply un-interrupted power supply to Lagos State Government Secretariat complex through 11.6 MW Natural Gas based power plant. Project scope was inclusive of engineering, procurement, construction and commissioning of 2 X 3.3 MW GE Janbacher Gas Genset & 2 X 2500 KVA MTU DG sets.

This project was the 1st EPC project executed Sterling And Wilson Co-Gen Solutions Pvt. Ltd overseas.

Project Challenges

- Executing a full-fledged EPC project in a country with limitedly developed infrastructure facilities
- Handling complex logistics in India for this project
- Establishing a supply chain with optimum balance of India sourced and locally sourced equipment
- Taking contingency risk measures to mitigate risks arising due to possibility of high average rainfall in a tropical country like Nigeria
- Employing imaginative and inspired engineering to achieve cost efficiency and ensure timely and quality delivery of project to Customer satisfaction

Engineering Highlights

- Project site had uneven landscape with slope downward bending
- Since backfilling would have led to loss of time and money, natural slope was left intact
- Instead roads around project site and drainage system were sloped as per the natural slope
- **This inspired engineering solution saved 2 months of installation time ensuring completion of civil work in dry months itself**
- Further pre-fabricated modules were used to ensure quality consistency and save site installation time

Project Delivery

- All site work civil, mechanical & electrical executed through local Nigerian contractors, which helped us in understanding local requirements and align us for the better delivery of the project. This also helped us in establishing our base in Nigeria.

- The logistics in India were handled with aggregation of equipment as per the dispatch schedule.
- ODC and Break Bulk items like EOT crane, Water treatment system was procured in Nigeria that saved logistics cost
- The impact of the rain on the schedule was managed by scheduling and executing all civil works during relatively dry months of the year.

By proactive project planning, by devising creative engineering solution and by proper supply chain management, we could successfully deliver the project fulfilling stringent safety and quality standards of Oando within contractual delivery period of 12 months.

Pictures







