100689-MEC-1COSY-E-2016
Mechanical Commissioning & Start-up Engineer

Holds a B. Sc. in Mechanical Power Engineering and has about 8 years experience working in commissioning, start-up and operation of turbine systems and auxiliaries. Demonstrated expertise in leading projects from inception to successful completion, ensuring operational excellence and compliance with safety standards. Proven ability in optimizing system performance, troubleshooting complex issues, and delivering training to enhance team capabilities.

PERSONAL DATA

Nationality	:	Egyptian
Birth Date	:	19/12/1991
Gender	:	Male
Marital Status	:	Married
Residence	:	Giza, Cairo

EDUCATION

: B. Sc. in Mechanical Power Engineering, Helwan University, 2016

LANGUAGES

Arabic	:	Native Language
English	:	Fluent

COMPUTER SKILLS

: Windows, MS Office, Internet

: Simulation and Calculation Tools: Experienced in using industry-standard software for HVAC system design and analysis.

: Distributed Control Systems (DCS): Proficient in operating and troubleshooting systems like Siemens T3000 and Yokogawa.

: CAD Software: Skilled in using AutoCAD for technical drawings and SolidWorks for 3D modeling.

: Project Management Software: Familiar with tools like Microsoft Project and Primavera P6 for effective project planning and execution.

TRAINING COURSES AND CERTIFICATIONS

: Fluid Power Systems and Components Course: Gained in-depth knowledge of hydraulic and pneumatic systems, focusing on their design, operation, and maintenance.

: Thermal Power Plant Management and Operation Course: Acquired comprehensive skills in managing and operating thermal power plants, with an emphasis on efficiency, safety, and environmental compliance.

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Apr. 2023 till now
Employer : El-Sewedy (PSP)
Project : Layyah Combined Cycle Power Plant, Sharjah, UAE
Job title : Mechanical Commissioning & Start-up Engineer
Job Description :

- Spearheaded the commissioning and startup activities for the Layyah combined cycle power plant, including 2 HRSGs and 1 steam turbine, contributing to the plant's 1025MW capacity enhancement.
- Led the execution of comprehensive commissioning activities for Balance of Plant (BOP) steam turbine systems, including solo/heat run tests, flushing, air blow, rotor lift adjustments, steam blow assistance, and vacuum operations, enhancing system reliability and performance.
- Conducted meticulous startup and shutdown assessments, troubleshooting, and problem analysis to ensure seamless power plant operations, significantly reducing downtime and enhancing operational efficiency.
- Fostered collaboration with the Commissioning Manager, Site Manager, and Engineering Department, providing detailed progress reports and effectively addressing challenges, ensuring project milestones were met on schedule.
- Demonstrated expertise in DCS operation, optimizing system performance and ensuring adherence to safety protocols through meticulous supervision of lock-out/tag-out activities.
- Maintained strict adherence to Operation Status, conducting routine maintenance and periodic tests to optimize combined cycle performance, contributing to sustained plant efficiency and reliability.

Dates : From Apr. 2022 till Sep. 2022
Employer : Mitsubishi Power Systems
Project : AL BASRA - IRAQ - El-Hartha Thermal Power Plant (4x200MW) (Sup Critical)
Job title : Mechanical Commissioning TFA
Job Description :

- Played a pivotal role in the commissioning of the El-Hartha thermal power plant, overseeing the preparation and commissioning of equipment for 4 supercritical units, each 200MW, ensuring they met stringent performance criteria.
- Orchestrated the commissioning of critical systems including lube oil, control oil, and seal oil flushing, steam blow, and initial turning gear adjustments, enhancing system integrity and operational readiness.
- Directed initial startup procedures for the steam turbine, including over-speed and synchronization valve tests, leading to the successful execution of Performance Guarantee (PG) and Reality Test (RT) phases, thereby affirming the plant's operational excellence.
- Leveraged TCS operation using DIASYS, facilitating efficient startup/shutdown assessments, troubleshooting, and comprehensive problem analysis, ensuring high equipment performance and reliability.
- Championed preventive maintenance schedules, ensuring equipment longevity and minimizing unscheduled downtime, thereby bolstering plant operational efficiency.

Dates : From Aug. 2021 till Jan. 2022

Employer : Elsewedy Electric Power Systems Projects

Project : Al-Wilidiyyah - Assiut Steam Power Plant 1x670MW "Supercritical" BOP contract CP-118

Job title : Commissioning & Start-up Engineer

Job Description :

- Played a key role in the commissioning team, rigorously testing equipment and systems to ensure compliance with established work procedures, significantly contributing to the project's adherence to quality standards.
- Demonstrated proficiency in DCS operations using advanced Yokogawa & T3000 Siemens systems, optimizing unit startup procedures and enhancing operational efficiency.
- Led the meticulous preparation of the unit before startup, transitioning smoothly through cold, warm, and hot phases, ensuring system integrity and readiness for operation.
- Developed and executed precise startup/shutdown protocols tailored to project scope, minimizing operational risks and ensuring system reliability under various conditions.
- Implemented robust safety measures to secure the unit during emergency conditions and unplanned shutdowns, maintaining a flawless safety record throughout the project duration.
- Provided essential support to the mechanical group during maintenance activities, ensuring uninterrupted unit operation and minimizing downtime.
- Responsible for comprehensive reporting on unit and equipment conditions to the operation team leader and commissioning manager, facilitating informed decision-making and timely interventions.
- Managed periodical equipment changeover procedures, ensuring seamless transitions and sustained operational performance.
- Conducted diligent follow-ups with the technical office regarding equipment conditions, focusing on critical aspects such as lubrication, working hours, and bearing inspections, thereby enhancing equipment reliability and service life.

Dates : From May 2021 till Aug. 2021

Employer : Elsewedy Electric Power Systems Projects

Project : Layyah CCPP, MPW-ELSEWEDY Consortium, 1100MW - Sharjah, UAE

Job title : Commissioning Engineer

Job Description :

- Engaged in the initial preparation and pre-commissioning activities of the Layyah combined cycle power plant (1025MW capacity), ensuring all equipment, including main oil tanks, lube oil piping, and first fillings, were ready for operational commencement.
- Conducted comprehensive commissioning of critical systems such as Lube oil, Control oil, and Seal oil by performing system flushing, steam blow operations, and initial turning gear adjustments, setting a solid foundation for system reliability and performance.
- Led the initial startup of the steam turbine, executing critical tests such as over-speed, synchronization, and valve functionality tests (MSV, GV, RSV & ICV), confirming system readiness and operational integrity.
- Managed unit stabilization and operational activities, culminating in successful Performance Guarantee (PG) Tests and Reality Tests (RT),

while acting as the Unit Controller to ensure plant operation efficiency and emergency responsiveness.
- Utilized TCS operation with DIASYS for effective startup/shutdown assessments, troubleshooting, and in-depth problem analysis, enhancing equipment performance and operational reliability.
- Monitored and followed up on the performance and operation of equipment, ensuring adherence to preventive maintenance schedules and contributing to the plant's long-term operational excellence.

Dates : From Jul. 2020 till Apr. 2021
Employer : Doosan Heavy Industries & Construction Co. Ltd
Project : Assiut Steam Power Plant 1x670MW Supercritical - Doosan Frame "HPIP-LP4F-GEN-33.5" Steam turbine 670MW (Three-cylinder HP-IP, LP1 and LP2 with 24KV generator hydrogen and stator cooling water system and turbine auxiliaries)
Job title : Commissioning & Start-up Engineer
Job Description :
- Led the preparation of all equipment for commissioning, including pre-commissioning solo runs, heat run tests, inspections, and first fillings, setting the foundation for successful system activation.
- Oversaw the commissioning of critical systems such as Lube oil, Control oil, and Seal oil, ensuring system flushing and initial adjustments were conducted with precision, enhancing system reliability.
- Conducted initial startup tests for the steam turbine, including over-speed and synchronization valve tests, leading to successful Performance Guarantee (PG) and Reality Test (RT) phases.
- Utilized TCS operation using DIASYS for efficient startup/shutdown assessments, troubleshooting, and problem analysis, ensuring high levels of equipment performance and reliability.
- Implemented preventive maintenance schedules as pre-scheduled, contributing to sustained equipment operation and minimizing the need for unscheduled repairs.

Dates : From Sep. 2019 till Apr. 2020
Employer : Mitsubishi Hitachi Power System (MHPS)
Project : South Helwan Supercritical Power Plant 3x670MW Supercritical - MHPS Frame "TC4F-40.5" Steam turbine 670MW (Three-cylinder HP-IP, LP1 and LP2 with 24KV generator hydrogen and stator cooling water system and turbine auxiliaries)
Job title : Commissioning & Start-up Engineer
Job Description :
- Prepared all equipment for commissioning, conducting pre-commissioning solo runs, heat run tests, and thorough inspections, ensuring system readiness for operational launch.
- Managed the commissioning of Lube oil, Control oil, and Seal oil systems, performing flushing and initial gear adjustments, which facilitated smooth system integration and operation.
- Led initial startup procedures for the steam turbine, conducting critical over-speed and synchronization valve tests, which verified system operational integrity and performance.
- Coordinated startup/shutdown activities and emergency responses, ensuring the successful execution of Performance Guarantee (PG) and Reality Tests (RT), thereby affirming system reliability and efficiency.

- Maintained vigilant oversight of equipment performance and operation, implementing pre-scheduled preventive maintenance to uphold system functionality and longevity.

Dates : From Jul. 2018 till Aug. 2019
Employer : Techint Engineering & Construction
Project : South Helwan Supercritical Power Plant 3x670MW (BOP Contract CP-118)
Job title : Operation Engineer (DCS)
Job Description :

- Support commissioning group during testing equipment or systems according to the work procedure.
- DCS operation using Foxboro 2014 Schindle & T3000 Siemens systems.
- Unit preparation before start-up (Cold, Worm, Hot).
- Start-up/Shutdown procedures for that scope.
- Secure the unit during emergency conditions/shutdown.
- Support the mechanical group during the maintenance work during unit online operation.
- Reporting the unit and equipment condition to operation team leader and commissioning manger.
- Periodical equipment changes over procedures.
- Follow up with the technical office about the equipment condition such as (lubrication, working hours, bearing inspection……etc.).

Dates : From Jan. 2018 till Jun. 2018
Employer : Elkrom Middle East
Project : New Capital Combined Power Plant 4x1200MW (each unit 2x400MW GT, HRSG, 1x400MW STG)
Job title : Piping Engineer
Job Description :

- Diagnosing breakdown problems.
- Verify the documents / materials received are in accordance with the standards, manufactured / fabricated in accordance with the specification.
- Supervisor on receipt, inspection, checking and storage of materials.
- Install Piping System (Main Steam Critical System (Non-Critical System - Lube System).
- Hydro-test for Critical & Non-critical system, Lube oil system hydro test.
- Follow up the gridding and welding pipe according the WPS.

Dates : From Dec. 2016 till Dec. 2017
Employer : Techint Engineering & Construction
Project : South Helwan Supercritical Power Plant 3x670MW (BOP Contract CP-118)
Job title : Field Engineering Coordinator
Job Description : Ensure assigned jobsite operations follow specifications, completed on schedule, within budget and to quality standards. Provide technical and administrative direction to lead field engineer with construction engineers, coordinators and others, Jobsite contacts are with contractors, project management and any jobsite personnel assigned within area of responsibility. Office contacts are with all levels of construction and engineering for following packages:

- Air compressor system (Centrifugal compressor - screw compressor - air

receivers - air dryers...).
- Pumps and Drives (Multi stage centrifugal pumps, steam turbine drive, fire pumps…).
- Reciprocating engine (Diesel generator & diesel fire pump).
- Hydrogen compressors.
- Heat Exchangers (Heaters – Coolers).
- Different types of Valves (Gate, Butterfly, Check, Ball and Control Valve).
- Pressure vessels (Reboiler system).
- Hydrogen generating and storage plant system.
- Nitrogen & carbon dioxide bulk storage system.
- Tanks (Light Fuel Oil, Lubrication Oil, Water, Chemical Tanks).

Field of experience :

- Installation and Commissioning: Proficient in identifying pre-installation requirements and providing comprehensive installation and commissioning support.
- HVAC System Engineering: Skilled in designing HVAC systems using simulation and calculation software, ensuring optimal system performance.
- Construction Monitoring: Capable of monitoring construction activities to ensure project progress aligns with planned schedules and quality standards.