104641-MEC-45CMS-E-2004
Senior Maintenance Engineer

Holds a B. Sc. in Mechanical Engineering and has 12+ years of experience in the revamping, troubleshooting, maintenance, installation, commissioning and start-up for rotating equipment in Petrochemical and Oil/Gas companies.

PERSONAL DATA

Nationality	:	Egyptian
Birth Date	:	21/11/1982
Gender	:	Male
Marital Status	:	Married
Residence	:	Suez

EDUCATION

: B. Sc. in Mechanical Engineering, Helwan University, 2004

LANGUAGES

Arabic	:	Native Language
English	:	Fluent
German	:	Fair
French	:	Fair

COMPUTER SKILLS

: Windows, MS Office, Internet
: AutoCAD 2002 (2D)
: Solid Works 2012

TRAINING COURSES AND CERTIFICATIONS

: Centrifugal compressors, Engineering Syndicate (Dec. 2015).
: Numerous training sessions and workshops on implementing TPM (Total Productive Management) at USCE (from Aug. 2014 till present).
: Pro-active Cooperation, USCE (Aug. 2014).
: PMP (Project Management Principals), USCE (Jun. 2014).
: BOSIET approved by OPITO, valid till 26/11/2016, Reg. 200099647, 52625700711127.
: Centrifugal pumps installation/maintenance in RuhrPumpen Germany, Witten (Nov./Dec. 2011).
: Vibration Analysis in OGS Training Company (Nov./Dec. 2009).
: Antifriction Bearing in OGS Training Company.

: Mechanical Seal, OGS Training Co.

: Reciprocating engines for Engineers in OGS Training Company (Dec. 2008).

: Electrical Motors in Suez Oil Processing Company (Nov./Dec. 2008).

: Fire watcher course, Hazardous materials course, Confined space entry course, Pathogens Protection course and First aid course In Transocean offshore drilling.

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Mar. 2014 till now

Employer : USCE, Suez, Egypt

Job title : Senior Maintenance Engineer

Job Description :

- Supervise, direct and control all Rotating Equipment maintenance activities in shop / refinery as assigned. Responsibilities include supervising all maintenance, testing, modification & project activities, especially of complex nature, review and commenting on design / drawings / specifications; recommending improvements in operating conditions and work procedures / standards.
- Executing maintenance activities in coordination with Operations and other Departments; Personally supervising maintenance jobs on critical rotating equipment & auxiliaries and carrying out special / non routine assignments.
- Develop and review with discipline supervisor the discipline assets maintenance strategy, programs, and directions in compliance with vendor recommendations, codes and standards, and best practice to ensure effective maintenance activities and optimum asset life cycle cost.
- Implement maintenance activities (preventive, corrective, predictive, Inspection, and Performance Monitoring) – safely and efficiently to meet company and maintenance department targets and KPI's and emphasize effective resources consumption/utilization to secure optimum Maintenance cost.
- Correctly manage and report all maintenance activities and assets data / records through company CMMS (ORACLE) to keep continuous and valid records for all assets.
- Prepare - in conjunction with Planning and Discipline Supervisor- and implement plant shutdown and turnarounds maintenance activity plans to meet company targets and KPI's.
- Troubleshoot, and Locate equipment faults and operating irregularities by making the necessary diagnostic tests, measurements and analyses, and plan toward remedy.
- Develop equipment improvement plans through detailed analysis of historical reliability data and through the identification of equipment vulnerabilities.
- Develop/ review maintenance work instruction (MWI) for all discipline equipment according to Equipment Original Manufacture (EOM) recommendation and maintenance best practices.
- Work with the discipline Supervisor in the development of annual budgets and play a key role in the management and control of costs.
- Supervise the site man power staff Technicians and Foremen in all discipline equipment Day to Day Activities to accomplish maintenance

activities safely, timely, and efficiently.

- Periodically evaluate the contract provider's performance (technical, HSE, behaviour, communication, etc...) to act upon improvement to reach accepted performance.
- Develop and periodically review with discipline supervisor inventory list of all discipline required assets and equipment spares (operational and capital spares) with optimum Min/Max levels satisfying plant safe operating targets and meeting optimum cost – and follow up order accordingly. This will be done via interchangeability study.
- Liaising with discipline supervisor, communicate - and report as appropriate - with other dept's (technical, operations, reliability team, other sites, etc …) to ensure plant vulnerability and reliability issues are addressed, investigated, and effective action plans in place.
- Recognize and assess the discipline equipment risks and apply the appropriate mitigation to avoid any potential hazard (HID).
- Provide input into specific risk assessments for both equipment and system related to evaluate the risk of dealing with critical situations during maintenance activities.
- Monitor/review spare parts stock, in order to keep maintenance activities running without stopping and to minimize the non-moving items inside the store.

Dates : From Dec. 2009 till Mar. 2014

Employer : RuhrPumpen Inc.

Job title : Technical Support Field Service Engineer

Job Description :

- Provide customer support during delivery of start-up services, field testing, field repairs, and customer training.
- Provide in-field technical support in all aspects of the installation, commissioning, start-up, vibration testing, functional and performance testing, training, and troubleshooting on pumps and related rotating equipment (according to API standards) which includes but not limited to (alignment, leveling, grouting, pipes stress checking and correction, etc...).
- Responsible to establish and maintain a strong relationship with customers by acting as a trusted advisor and resource during on site activities. Work closely with Service Center and in it, and, Sales Engineers, and customers to deliver services and solutions.
- Report potential business opportunities.
- Maintain compliance with all established Environmental, Safety & Health policies and procedures.
- Supervise/coordinate sub-contractors and customer personnel as required.
- Complete formal technical field reports, time sheets, and expense reports for each field assignment.
- Provide daily communication to the Field Service Manager/Sales Associate on any issues that arise on site.
- Provide technical solutions to problematic pump/systems issues.
- Provide support to factory warranty engineers by investigating and resolving pump product issues in the field.
- Troubleshoot the malfunctioning units & set a final economical solution of the problem with aid of Root Cause Failure Analysis techniques.

- Perform pump and system diagnostic and analysis including review of equipment application and operation, design and materials and vibration.
- Using condition monitoring techniques (vibration spectrum, heat guns, etc…) in order to diagnose unit's troubles and fix them.
- Identify and resolve any defect(s).
- Provide Failure Analysis and Field Reports and recommend upgrades and complete expense claims and time sheets.
- Provide technical support to assembly workshop team and test team when needed.
- Train customers and employees on operation and maintenance of units, alignment and other pump-related technicalities.
- Support maintenance of complaints database to track warranty problem trends and generate monthly reports.
- Conduct customer plant. Utilize these surveys for project sales opportunities to replace outdated units (efficiency upgrades) or secure parts orders (maintenance upgrades).
- Document all procedures and recommendations and report to end-user and Ruhrpumpen.
- Prepare Standard Work Procedure (SWP) for maintenance of units in accordance to best practice & quality plans.
- Make sure of achieving the assigned jobs in compliance of Ruhrpumpen, safety & quality policies.
- Impart extensive knowledge of the business to motivate and train the end user staff regarding the applicable maintenance activities required for their machines.

Dates : From Mar. 2006 till Dec. 2009

Employer : Khalda Petroleum Company

Job title : Rotating Equipment Maintenance Engineer

Job Description :

- Developing basic design, detailed engineering and procurement related activities of Rotating Equipment/packages such as diesel engines, pumps, compressors and fans.
- Ensure that Process Safety and Risk Management objectives are practiced daily through participation in Management of Change, Process Hazards Analysis, Process Safety Hazard Hunter, and Pre-start-up Review responsibilities.
- Liaise with Rotating equipment vendors and Maintenance Team Leaders in the delivery of emergent maintenance and repair activity.
- Ensure RE (Rotating Equipment) maintenance activities are executed efficiently and with suitably skilled and competent resources.
- Issuing requests for quotations, purchase specifications, bid evaluations, and purchase requisitions.
- Lead the implementation of reliability improvement activity including the delivery of a rolling 3 year improvement program for rotating equipment.
- Ensure RE activity is given appropriate visibility and priority within the asset 12 week & 6 week plans.
- Exploit best available technology and investigate and make recommendations for the implementation of new technologies to improve predictive maintenance capability.
- Participating in inspections and testing of equipment as required.
- Drive a Continuous Improvement agenda in support of high reliability;

complete RCFA investigations to understand the root cause(s) of failure and develop solutions to eliminate defects and prevent recurrence.
- Support others to refine and optimize rotating equipment maintenance.
- Proactively manage the integrity of rotating equipment and ensure maintenance and inspection is carried out in support of safe and reliable operation.
- Manage maintenance programs (either preventive or corrective) through MAXIMO.
- Supervise & provide technical support to maintenance individuals (junior engineers & technicians) during maintenance procedure of any equipment.
- Supervise the commissioning & start-up of new equipment.
- Check for all rotary machines readability in cooperation with technical team.
- Lead work team in field within safety guide lines & standards.
- Manage maintenance programs activities (either preventive or corrective) & find applicable solutions to minimize the worst actors.
- Provide technical support to maintenance individuals during maintenance procedure of any rotary equipment & prepare standard maintenance procedures for routine & general inspection.
- Define root cause of failures & find permanent solutions for repeated problems using analysis tools & inspection.
- Supervise the commissioning & start-up of new rotary equipment.
- Spare parts review & check for accuracy.
- Check for all rotary machines readability in cooperation with technical team.
- Lead work team in field within safety guide lines & standards.
- Acting as workshop engineer in compliance with the quality control policy with co-operation with the engineering department to make control over document revisions, reduce back log activities & improve productivity.
- Imparted extensive knowledge of the business to motivate and train the staff.
- Involved in training, script writing, people development and support.
- Consistently motivated and monitored metrics and processes to achieve results.

Dates : From Jun. 2005 till Mar. 2006

Employer : Transocean Offshore Drilling Company

Job title : Motor Man

Job Description :
- Concentrate on integrity of engines and motors, their working, repair and lubrication.
- Ensure that equipment remain in working order while maintaining their safety quotient.
- Work on oil rigs and drilling equipment.
- Ensure complete repair of all equipment at all times (Under guidance of Rig Mechanic).
- Make sure the schedules are followed for timely completion of projects.
- Maintain proper logs of equipment and their current status.
- Detect and rectify backlog areas in an equipment line with minimum time lag.

Dates : From Mar. 2005 till Jun. 2005

Employer : Co-Operative Society of Petroleum

Job title : Rotating Equipment Engineer

Job Description :

- Ensure maintenance activities are executed efficiently and with suitably skilled and competent resources.
- Supervise the commissioning & start-up of new equipment.
- Check for all rotary machines readability in cooperation with technical team.
- Lead work team in field within safety guide lines & standards.
- Prepare spare parts drawings for spare parts fabrication in internal or external workshops and also review & check for accuracy.

Field of experience :

- An experienced Senior Rotating Equipment Maintenance Engineer and Technical Support Field Service Engineer.
- 12+ years of experience in the revamping, troubleshooting, maintenance, installation, commissioning and start-up for rotating equipment in Petrochemical and Oil/Gas companies, such as:
  - Khalda Petroleum Company (KPC) a joint Venture with Apache.
  - United Gas Derivatives Co. (UGDC) (LPG, Propane, Condensate).
  - Egyptian Propylene Co. (EPP) (Propylene & Polypropylene).
  - MOPCO (fertilizers).
  - Perobel Petroleum Co., a Joint Venture with ENI.
- Also have a very good experience using analytical and assisting methods to troubleshoot rotating equipment problems, such as Vibration analysis, RCFA DMAIC, etc… and organizing techniques such as 5S and LEAN, and CAD programs such as AUTOCAD and SOLID WORKS.
- Experienced in the following:
  - Intensive hands-on experience in troubleshooting, overhauling, revamping, Installation and commissioning of the rotating equipment (Pumps, Compressors, Gearboxes, fans, blowers, engines, etc…).as well as conducting tests & inspections to ensure operational effectiveness of plant & utilities.
  - Experienced in static equipment such as valves, heat exchangers, etc…
  - Very well experienced in diagnosing machines troubles using condition monitoring techniques such as vibration spectrum analysis (dual channel), oil analysis, heat gun, etc…
  - Reviewing engineering shop drawings, layouts, diagrams, technical specifications, cost estimates for erection & commission of the plant.
  - Familiar with Reliability optimization strategies such as Reliability Centered Maintenance (RCM), Planned Maintenance Optimization, Reliability Assurance Modeling, Life Cycle Costing, Threats, Root Cause Analysis (RCA).
  - Study of the manuals, data sheets, performance characteristics of the rotary equipment and best maintenance practices.
  - Management of rotary equipment spares.
  - Root Cause Analysis (RCA) and Incident Investigation (II) for failures of equipment and incorporate the recommendations to the relevant maintenance strategies.
  - Solid knowledge with governing standards as API, ISO, ASME & ANSI.

- Leading, on-hand training and coaching colleagues and subordinates.

- SOME CAREER MILESTONES:
  - KPC (Khalda Petroleum Company): 4 days instead of 15 for complete overhaul for a AJAX combined compressor-engine: The manufacturer rep. engineer used to overhaul the AJAX reciprocating compressor in 15 days, then we started to do it with ourselves, and it took only 4 days with a very good results.
  - Petrobel (Balayem Petroleum Company), Sinai, Egypt: Client did the installation of pumps by his own, at start-up, high vibration readings (5.5 and 7.5 mm/s rms) were found in two pumps. After condition monitoring, it was figured out that most probable cause for vibration was twisted baseplate (improper installation). Uninstalled (removed) baseplate from foundation, and re-machining top of pump and motor pads, re-installed, now max vibration values are 2.5 mm/s and 1.5 mm/s rms respectively. Note: proper successful technical consultation and problem sovling done only in this project by author of this CV gained my ex-company (Ruhrpumpen) an amount of 300 000 USD.
  - MOPCO, Egypt (Misr Fertilizers Production Company): This BB2 (API 610 classified) pump failed several times in site before, then repaired by manufacturer's Rep, and then failed again. MOPCO sent it unassembled to RuhrPumpen factory, successfully diagnosing, repairing pump. Installed pump in site and started up, operating characteristics were very good; pump operated after that with zero break-down time.
  - S.I.O.T. (TAL), Italy (The Società Italiana per l'Oleodotto Transalpino (SIOT) S.p.A.): This VLT pump used to fail every two weeks, S.I.O.T. consulted RP to fix that, RP throughout checked and inspected pump operating conditions and site conditions, all issues fixed and pump repaired, then pump operated for more than eight months (since Nov. 2011) with zero break-down time. Participated in the final stage of this project.
  - SOPC, Egypt (Suez Oil Processing Company): Installation of 5000 m^3/hr TR pump (VS2) in SOPC (Suez Oil Processing Company), and due to site conditions (low ceiling), we had to disassemble the pump then reassemble it piece by piece into foundation ring. Max bearing housing vibration value was 0.5 mm/s (rms).
  - APC, Egypt (Alexandria Petroleum Company):
    - Revamping of two pumps (types BB1 & BB2) in Alexandria Petroleum Company (APC), then supervised the installation, commissioning and start-up of these two pumps along with another new 19 pumps.
    - Modification in mechanical seal plan in order to overcome some problems in 10 pumps in APC project.
  - Complete installation, commissioning and start-up (acc. to API 686) of big pump projects, such as:
    - Two 5000 m^3/hr vertical pumps in SOPC.
    - Three 3000 m^3/hr vertical pumps in SUMED.
    - Thirteen pumps of different sizes in APC.
    - And many other.
  - USCE:
    - Regarding the chronic case; here are some cases:

        - In the beginning, some important measuring and repairing tools were neither available nor trained at by maintenance team, so they were purchased and then maintenance team underwent a hands-on training on how to use and evaluate the results.
        - Some screw conveyors and mixers needed complete inspection, found sever misalignment between bearings, and packing housing, also, it was needed to change some procedures in handing over from machining w/s; rectified.
        - Some mixers and strike receivers were badly leaking, changed the design of packing and leakage was almost reduced to zero.
        - Some agitators needed change in design and removal of sole plate and reinstalling according to API standard, done
        - Majority of pumps were suffering from repetitive failures, some pumps needed re-installation, some pumps needed some accessories, and some pumps needed complete replacement due to improper selection from first place.
        - PM's were done in complete improper way, so moved the lowest-evaluation members from 3 mechanical shifts, and assigned them as PM team under my direct supervision, their skills were raised and consequently after one month of hands-on training, they were capable of decreasing the pumps failure rate from 2 or 3 pumps per day, to 1 or 2 pumps per weeks.
    - Alongside normal tasks for senior engineer that should not be affected.
    - Short-term results was dramatic decrease of R&M cost to almost one fifth, and obvious reliability loss decrease (e.g. for pumps to almost 0.2 %).
- Experienced in manufacturing, assembly, installation, inspection and repair of centrifugal pumps manufactured by Ruhrpumpen inc. acc. to API 610, API 686; such as (RPP, VTP, SCE, TR, ZM, SVN, VLT, RON …etc.), beside maintaining and performance testing of other brands' pumps such as Goulds, KSB Flowserve and POMPE GABBIONETA.
- Experienced in rotating equipment inspection & having experience of 3.5 years total in oil plant industry and gas plant attached.
- Maintenance and overhauling of diesel generator set type caterpillar models 3304, 3306, 3406 & 3412.
- Maintenance of Compressors, like Gardner Denver (R30, R40), Atlas Copco, Ingersol Rand, Bauer, Champion and Waukesha.
- Have worked with multinational companies in Egypt, was exposed to different work environments and have the ability to be adapted with any work environment.
- Responsible for the maintenance activities of all plant equipment of the Main oil gathering centre.
- Well experienced in maintenance activities of reciprocating compressors, multistage horizontal centrifugal pumps, positive displacement pumps like gear & plunger pumps.
- Computer literate, having good experience in different computer applications, and very good communication skills in English including excellent technical report writing skills. Good liaison skills and the ability to communicate at all levels of the organization. Advanced presentation

skills. Excellent interpersonal skills and ability to establish networks within and outside the organization. Good counseling and coaching skills Strong leadership ability.

- Maintained equipments like:
  - Ajax reciprocating gas compressors.
  - Hot Oil Heater.
  - Glycol reciprocating pumps.
  - Chemical injection pumps.
  - Working in spare parts preparation and its optimum stock level.
  - Studying the technical data concerning the process equipment and performance modification.
  - R.O desalination plants (small pure water production units).
  - Cooling Fans and air blowers.
  - High experience in shaft to shaft alignment by laser apparatus (type OPTALIGNE plus).
  - Carrying out all preventive (Maximo system) and corrective maintenance tasks.
  - Carrying out major overhaul for reciprocating compressors and arrange all tasks and clearance measurements.
  - Carrying out major overhaul for centrifugal compressors (internally inspection for Impellers, Rotor, labyrinth seals, dry seals and installing new radial &thrust bearings).
  - Carrying out major overhaul for instrument Air compressors (oil free) and measure performance.
  - Carrying out overhaul and repairing for many centrifugal and reciprocating pumps.
- Example for oil plant experience:
  Maintenance and Troubleshooting for Utility Area of Oil Plant which include the following Packages:
  - Centrifugal pumps, types: RUHRPUMPEN, KSB, POMPE GABBIONETA, GOULDS, MISSION, INGERSOL RAND, PACIFIC and NOUVO PIGNONE.
  - Multistage axial split centrifugal pumps.
  - Reciprocating pumps, type: WHEATLY, NATIONAL, UNION, GASO &TRICO.
  - Plate HEAT EXCHANGERS TYPE: ALFA-LAVAL & GRAHAM.
  - Water makers ALVA LAVAL type.
  - Shell & tube heat exchangers.
  - Working in spare parts preparation and its optimum stock level.