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Professional Summary

I am passionate about applying my technical skills to improve production systems and develop innovative solutions. My experience spans various aspects of mechanical engineering, including product design, materials selection, process optimization, and drafting, with a particular focus on manufacturing. I am driven by the challenge of transforming conceptual ideas into tangible products while ensuring efficiency, quality, and cost-effectiveness. With a deep interest in production systems and drafting, I am dedicated to exploring new technologies and methodologies to enhance manufacturing processes

Skills and Competence

- AutoCAD
- Solidworks
- CNC-CAD-CAM
- Microsoft Office
- Graphic Design
- Multitasking and Organization

Work and Experience

Mechanic (Full Time)

CV Purnomo Motor | April 2018 – October 2019

Duties and Responsibilities

- Performed engine overhauls on cars, including replacing and repairing key components such as pistons, valves, crankshafts and bearings ensuring optimal engine performance and improved durability.
- Conducted routine tune-ups on vehicle engines, including adjustments carburetors, spark plugs and ignition systems to enhance fuel efficiency, engine performance and reduce emissions.
- Diagnosed mechanical and electrical issues using diagnostic tools and manual methods to troubleshoot problems in electrical systems, ignition systems, fuel systems, and cooling systems.
- Carried out regular preventive maintenance and component replacements such as air filters, oil filters, engine oil and transmission systems to maintain vehicle performance and reliability.
- Ensured vehicles undergoing repairs or maintenance passed road tests to verify that the vehicle operated correctly and met safety and performance standards.
- Provided customers with preventive maintenance recommendations to avoid costly repairs and extend vehicle lifespan.
- Worked on vehicle electrical systems, alternators and battery systems, ensuring smooth ignition and power charging systems.
- Managed spare parts inventory, including ordering and checking the availability of essential components to ensure smooth repair operations.
- Followed strict workplace safety procedures and maintained a safe and organized workspace, ensuring equipment was in good condition.
- Ensured all work was performed in accordance with automotive industry standards and quality procedures to deliver consistent, reliable results.

Technical Drafter (Full Time)
PT Kereta Api Indonesia (Persero) - Divre II Padang
April 2020 – December 2020

Duties and Responsibilities:

- Create and develop technical drawings for construction projects using AutoCAD, SolidWorks, or other CAD software in accordance with railway industry standards.
- Prepare working drawings for the construction of railway tracks, station buildings, and other supporting facilities.
- Revise and update drawings based on instructions from the engineering team or project engineers.
- Coordinate with the project team, civil engineers, and architects to ensure designs meet technical specifications and site requirements.
- Manage and archive technical drawing documents in both hardcopy and softcopy formats according to company procedures.
- Assist in material requirement analysis and estimate the quantity of materials needed for the construction project.
- Conduct site surveys and measurements to gather accurate data for the drafting process.
- Ensure designs comply with safety standards, technical regulations, and applicable railway industry policies.
- Provide regular reports to supervisors or project managers regarding the progress of technical drawings and project documentation.
- Support the project team in resolving various technical aspects of construction to meet the scheduled timeline.

Technical Skills:

- CAD Software: Proficient in AutoCAD, SolidWorks or other 3D modeling software.
- Technical Drawing: Ability to read, interpret and create technical drawings following industry and construction project standards.
- Basic Structural Analysis: Understanding of material strength and basic load calculations in construction projects.
- Railway Construction Standards: Familiarity with regulations and design standards for railway tracks and supporting infrastructure.
- Technical Documentation Management: Skilled in organizing, managing, and maintaining project-related technical drawings.
- Material Estimation: Knowledge of construction materials and the ability to calculate material requirements for projects.
- Surveying and Measurement: Capable of conducting site surveys, taking measurements, and collecting data for design purposes.
- Microsoft Office: Proficient in Excel, Word, and PowerPoint for reporting and project documentation.
- Technical Communication: Ability to coordinate with engineers, contractors, and technical teams to explain design specifications and revisions.
- Problem-Solving: Strong analytical skills to identify and resolve technical issues related to engineering drawings in construction projects.

EDUCATION

Bachelor of Mechanical Engineering (S.T.)
Ekasakti University | Graduated October 2024 | GPA: 3.43

Relevant Coursework and Skills:

- Fundamentals of Mechanical Engineering: Mechanics, thermodynamics, materials engineering and system dynamics.
- Machine Design and CAD: Proficiency in AutoCAD and other design software for technical drawings and modelling.
- Material Science and Structural Analysis: Application of engineering materials, stress and deformation analysis and fluid flow evaluation.
- Manufacturing Processes: Machining, welding, casting, fabrication and CNC implementation in production.
- Industrial Engineering and Project Management: Handling mechanical projects from design to execution, including research and process optimization.
- Turbine and Boiler Installations: Application in power generation and industrial systems.
- Communication and Reporting: Technical documentation, teamwork and project presentations.

Technical Skills:

- Design and CAD Software: Proficient in AutoCAD, Autodesk Inventor for 2D/3D modeling, drafting and design of mechanical systems.
- Manufacturing Processes: Knowledge of CNC machining, casting, welding and fabrication techniques for product development and production.
- Mechanical Testing and Quality Control: Experience in performing mechanical tests such as tensile, fatigue and impact testing.
- Materials Science: Expertise in material selection, fatigue analysis and the properties of metals, polymers, ceramics and composites.
- Project Management and Industrial Engineering: Strong understanding of project planning, resource management and process optimization in mechanical engineering projects.
- Power Generation and Thermal Systems: In-depth knowledge of turbine systems, boiler installations and energy conversion processes for industrial applications.
- Thermodynamics and Heat Transfer: Advanced understanding of thermodynamic cycles, heat exchangers, and principles of heat transfer, including conduction, convection and radiation.

Training (Course)
Designing Machine Element Drawing Using AutoCAD
Himpunan Mahasiswa Teknik Mesin (HMTM-UNES) | January 2023 – August 2024

Key Learnings:

- Mastery of AutoCAD fundamentals for machine element design.
- Efficient use of commands, layers, dimensions, and annotations.
- Creating 2D and 3D models of machine components using extrude, revolve, and sweep tools.
- Understanding CNC integration with CAD for manufacturing automation.
- Developing CNC-executable programs from CAD designs.
- Completion of practical projects on machine element design.

Specific Competencies:

- AutoCAD, CNC and CAD Machine: Expertise in technical drawing and modelling.
- Welding, Graphic Design and Software Engineering: Supporting engineering projects with technical and visual communication.
- Manufacturing Process Optimization: Enhancing design efficiency for production feasibility

Languages

- Indonesian (Native)
- English(Native)

Hobbies

- Designing with AutoCAD: Enjoy designing and drafting mechanical elements using AutoCAD for various design projects.
- Solving Psychometric Math Problems: Challenge myself with math problems to improve analytical and logical thinking skills.

Achievements

- Successfully completed 10+ engine overhauls, improving vehicle performance and extending engine lifespan by an average of 30%
- Increased fuel efficiency by 15% through precise carburetor adjustments, spark plug replacements, and ignition system tuning
- Diagnosed and resolved 95% of mechanical and electrical issues on the first attempt, reducing vehicle downtime and repair costs
- Implemented a preventive maintenance program, reducing major breakdown occurrences by 40% and extending vehicle service intervals
- Achieved zero workplace accidents by strictly adhering to safety protocols and maintaining a clean and organized work environment
- Optimized drawing revision workflows, cutting down revision time by 40% through better coordination with engineers and project managers.
- Assisted in the successful completion of track layout designs that improved operational efficiency and reduced construction errors.
- Contributed to a 15% reduction in material waste by enhancing the accuracy of material estimations and structural detailing.
- Implemented 3D modeling for railway infrastructure, improving visualization and communication of complex designs with stakeholders.
- Played a key role in ensuring 100% compliance with railway construction regulations and safety standards.
- Conducted on-site surveys and data collection, enhancing the precision of technical drawings and minimizing discrepancies between design and execution.
- Developed a digital archive system for technical drawings, improving document retrieval speed and reducing paperwork by 50%.
- Supported the engineering team in troubleshooting design issues, leading to faster resolution of technical challenges during construction.
- Ensured seamless integration of railway track designs with station and bridge structures, improving project efficiency and alignment accuracy.

Award

- Automotive Engineering Competency Certificate (BNSP)
  Certified in automotive engineering by BNSP validating technical skills in the automotive industry.
- Microsoft Certification
  Certified by Microsoft for proficiency in using Microsoft applications and software tools for data Analysis and design.
- AutoCAD Course - Mindluster
  Completed AutoCAD course on www.mindluster.com, enhancing skills in technical drafting and mechanical modelling.