

WEICHA

Weichai Power(DE)
Technologie - und Innovationszentrum



In our R&D group
Electric drives
we're looking for an

Electrical engineer (m/f/d)

Drivetrain design / Electric machine designer



The Weichai Power European Innovation Center located in Aachen is looking for great talents in the area of electrified mobile machinery.

Your tasks

- Design and analysis of electric drive systems
- Analysis of machine types and configurations
- Design of electric machines according to performance requirements
- accompanying the development process up to the validation prototype
- Feasibility analysis and cost analysis
- Preparation of research reports

Your skills

- Master's degree in electrical engineering
- Knowledge of the operating principles of el. machines and power electronics
- Basic knowledge of the control of electrical drive systems
- Knowledge of electromagnetic design of electric machines with FEM software
- Knowledge of loss modelling and thermal design of electric machines or components
- Strong communication skills, fluent English
- Excellent teamwork skills

Our offer

- Innovative projects in the area of mobile machinery, new energy, smart controls and component design
- Diversified international team in a friendly working environment with great development potentials

Contact: Dr.-Ing. Johannes Schmitz, johannes.schmitz@linde-hydraulics.com

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Weichai Power European Innovation Center
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In our R&D group
Electric drives
we're looking for an

Electrical / Electromechanical engineer (m/f/d)

Engineer for controls of electric drives



The Weichai Power European Innovation Center located in Aachen is looking for great talents in the area of electrified mobile machinery.

Your tasks

- Design and analysis of electric drive systems
- Design of controls and its software implementation of electric drive systems
- Hardware in the Loop preparation and testing
- Testing of new controls in mobile machinery prototypes
- Feasibility analysis and cost analysis
- Preparation of research reports

Your skills

- Master's degree in electrical engineering or electromechanical engineering
- Detailed knowledge of the control of electrical drive systems
- Experience in control theory and implementation in embedded systems
- Familiar with simulation software of related systems (Matlab/Simulink & AMESim)
- Ability to analyze complex systems
- Strong communication skills, fluent English
- Excellent teamwork skills

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In our R&D group
SystemTechnology
we're looking for an

System Engineer (m/f/d)

Engineer for hydraulic Systems in mobile machines



The Weichai Power European Research Center located in Aachen is looking for great talents in the area of electrified mobile machinery.

Your tasks

- Self-responsible work on Innovation projects
 - Research of the state of the art of hydraulic systems in mobile machines
 - Implementation of projects by using the required tools like simulation, Calculation, 3D Design, Hardware in the Loop testing, controller programming, etc.
 - Coordinate the project targets and progress with all partners and internal customers
 - Presentation and reporting of project results
- Generate new innovative ideas
- Supervise projects with RWTH and other partners

Your skills

- Successfully completed studies in mechanical engineering, automotive engineering, electrical engineering, or a comparable degree (Master Level)
- Fundamental knowledge in at least one of the following areas
 - Hydraulics (Systems, Pumps and Motors, Valves)
 - Mechanical drive trains (Gears, Power split)
 - Electrical engineering (e-motors, Converters, Battery technology)
 - Electronics (mobile controllers, Sensors, controller programming)
 - Thermodynamics
 - System Simulation / HiL testing
- Pioneering thinking and innovative mindset, Open to use new methods, tools and technologies
- Strong communication skills, fluent English
- Excellent teamwork skills

Our offer

- Innovative projects in the area of mobile machinery, and hydraulic components
- Diversified international team in a friendly working environment with great development potentials

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In our R&D group
Components
we're looking for an

Design Engineer (m/f/d)

Engineer for hydraulic component design



The Weichai Power European Research Center located in Aachen is looking for great talents in the area of electrified mobile machinery.

Your tasks

- Self-responsible work on Innovation projects
 - Research of the state of the art of hydraulic components especially pumps and valves
 - Implementation of projects by using the required tools like 1D simulation, calculation, 3D Design, FEA analysis, tribology contact simulation, etc.
 - Coordinate the project targets and progress with all partners and internal customers
 - Presentation and reporting of project results
- Generate new innovative ideas
- Supervise projects with RWTH and other partners

Your skills

- Successfully completed studies in mechanical engineering or a comparable degree (Master Level)
- Advanced knowledge in at least one of the following areas
 - Hydraulics pump and motor design
 - Valve design
 - Materials for hydraulic components
 - Tribology
 - Prototype testing
- Pioneering thinking and innovative mindset, Open to use new methods, tools and technologies
- Strong communication skills, fluent English
- Excellent teamwork skills

Our offer

- Innovative projects in the area of mobile machinery, and hydraulic components
- Diversified international team in a friendly working environment with great development potentials

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In our R&D group
Controls & sensing technology
we're offering the

Master's thesis

On-board CMS for predicting RUL of hydraulic rotational units



The Weichai Power European Research Center located in Aachen is looking for some great talents in the area of mobile machinery.

Your tasks

- Evaluation of current state of research regarding remaining useful life (RUL) calculation of hydraulic units
- Implementation of algorithms in test environment
- Validation of algorithms by test data
- Algorithm optimization for ECU execution

Your skills

- Fundamentals of data processing & condition monitoring
- Knowledge of Matlab/Simulink
- Self-organized and structured work

Our offer

- Collaboration within real industrial projects
- Diversified international team in a friendly working environment with great development potentials

Advance development within the areas

- Machines & applications
- New energy
- Smart components
- Controls & sensing technology
- Material, surface treatment & manufacturing
- Artificial intelligence

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Interested in this topic or given research areas? Contact us!

Contact:

Maximilian Waerder
waerderm@weichai.com





In our R&D group
SystemTechnology
we're offering the
Master's thesis

Future drive systems for excavators



The Weichai Power European Research Center located in Aachen is looking for some great talents in the area of mobile machinery.

Your tasks

- Configuration and dimensioning of innovative drive systems for excavators
- Efficiency analysis of new and state-of-the-art systems
- System evaluation and optimization
- Setup validation plan for the favored new system

Your skills

- Fundamentals of hydraulics
- Knowledge of Simcenter AMESim
- Self-organized and structured work
- Excellent teamwork skills

Our offer

- Collaboration within real industrial projects
- Diversified international team in a friendly working environment with great development potentials

Advance development within the areas

- Machines & applications
- New energy
- Smart components
- Controls & sensing technology
- Material, surface treatment & manufacturing
- Artificial intelligence

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In our R&D group
SystemTechnology
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Master's thesis

Merging electric and hydraulic components



The Weichai Power European Research Center located in Aachen is looking for some great talents in the area of mobile machinery.

Your tasks

- Merging of hydraulic and electric drive elements that are only found separately on the market today
- Generate different concepts
- Evaluate and select
- 3D design of the selected concept

Your skills

- Fundamentals of hydraulic & electric drives
- Knowledge of 3D design in CAD
- Self-organized and structured work
- Excellent teamwork skills

Our offer

- Collaboration within real industrial projects
- Diversified international team in a friendly working environment with great development potentials

Advance development within the areas

- Machines & applications
- New energy
- Smart components
- Controls & sensing technology
- Material, surface treatment & manufacturing
- Artificial intelligence

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Master's internship

Virtual sensing of electro-hydraulic drives



The Weichai Power European Innovation Center located in Aachen is looking for some great talents in the area of mobile machinery.

Your tasks

- Simulation of electrified actuators
- Actively support us in control design
- Supporting rapid control prototype implementation and testing

Your skills

- Knowledge of electric drives
- Knowledge of Matlab/Simulink
- Self-organized and structured work

Our offer

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Advance development within the areas

- Machines & applications
- New energy
- Smart components
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Contact:

Tobias Lange
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Master's internship

Thermal design of electric machines



The Weichai Power European Innovation Center located in Aachen is looking for some great talents in the area of mobile machinery.

Your tasks

- Simulation of simplified thermal model
- Actively support us in developing electric machines for mobile machines
- Validation of simulation models

Your skills

- Knowledge of electric machines
- Knowledge of Simulink
- Self-organized and structured work

Our offer

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Advance development within the areas

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Master's internship

Power management for hybrid vehicles



The Weichai Power European Innovation Center located in Aachen is looking for some great talents in the area of mobile machinery.

Your tasks

- Simulation of hybrid vehicles
- Actively support us in developing a power management strategy
- Support of Hardware-in-the-Loop tests

Your skills

- Knowledge of electric vehicles
- Knowledge of Simulink or AMESim
- Self-organized and structured work

Our offer

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Advance development within the areas

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- Smart components
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- Material, surface treatment & manufacturing
- Artificial intelligence

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