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E-drive Gearbox Research Scientist 电动车变速箱开发 (2 positions: RTC-AP-012; RTC-AP-017)

Bosch Corporate Research and Advance Engineering in China is conducting in-depth research projects in technology fields which define the future business of Bosch in China and worldwide. We continuously offer opportunities for talented engineers and scientists to work on challenging research topics. We work in international teams of leading experts, using state-of-the-art equipment and know-how. We are committed to driving the development of "New Energy Vehicles" in China by conducting fully localized R&D projects. In order to reinforce our EV team in Shanghai, we are now looking for a highly skilled Gearbox Scientist.

Job description

- Research and development of gearboxes for integrated drive systems (gear and e-motor) for electric vehicles and e-bikes / e-scooters (power range 1-30kW)
- Simulation, evaluation and test of e-drive systems and components
- Research in technology fields relevant for EV traction applications, especially identification of new trends and emerging technologies in China
- Management of research projects with internal and external partners (universities, research institutes and OEMs)

Required knowledge and experience:

- Master or Ph.D degree (preferred) in mechanical engineering, automotive engineering or related field, highly preferred: Ph.D thesis with focus on gear transmission
- At least 3 years of experience in academic or industrial R&D in gearboxes
- International experience and/or a focus on automotive applications preferred but not required
- Very good theoretical knowledge of the dimensioning of gearboxes (basic requirements of a gear tooth system) and the simulation of durability (ISO 6336) and efficiency
- Experience with mechanical design of gearboxes according to specific load profiles and requirements (preferred: including materials and manufacturability) using standard software (e.g. one of the packages KissSoft, FVA Workbench, UG, ANSYS, BearinX, RomaxDesigner, or MSC Adams)

Optional additional knowledge which will be useful for the position:

- Optional: experience with design and analysis of integrated e-motor/gear systems, ideally in kW range (traction applications for vehicle or e-scooter), e.g. in-wheel-drives / wheel hub drives, servo motors, geared motors, reducer gears, planetary gears
- Optional: basic knowledge of traction e-motors, e-drivetrain systems of Hybrid/Electric Vehicles/e-scooters/e-bikes
- Optional: insight into technology trends in e-scooter industry and market in China
- Optional: analysis and optimization of gear noise/vibration and wear, e.g. by microgeometry design of gear teeth

Competencies and attributes:

- Initiative and ability to lead research projects
- Demonstrated skill of finding creative technical solutions and new concepts for engineering challenges
- Efficient, goal-oriented, structured working style, experience in project work, habit to work according to plan
- Systemic, interconnected way of thinking, strong interest in related research fields
- High motivation for working towards e-mobility breakthroughs
- Strong team worker
- Very good communication skills, fluent in English (oral and written), good presentation skills