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Change History				
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CEN18800046	30/08/2026	CEN188V1.001	all	document creation

Junior Mechanical Engineer (Housing for HV Components, Harness and Connectors) **高压零部件壳体、线束与连接器初级机械工程师**

Working place: Tianjin

Recruiting number:1

Role overview

As a Junior Mechanical Engineer for housings of HV components, harness and connectors, you will support the mechanical design and development of housings and enclosures for high-voltage components as well as HV wiring harness and connector systems of battery electric and plug-in hybrid vehicles. Working under the guidance of senior engineers, you will contribute to 3D modeling, drawing creation and tolerance analyses, support packaging and integration topics, and collaborate with electrical, thermal and manufacturing engineering as well as suppliers. Across the full project lifecycle from concept to series production (SOP), you will actively learn HV mechanical design methodologies, support technical problem solving and help ensure full compliance with OEM specifications and automotive industry standards.

Key Responsibilities

- Support the design and development of housings and enclosures for HV components (e.g., inverter, OBC, DC/DC converter, BMS, PDU), considering thermal management, sealing, vibration and mechanical strength requirements.
- Assist in designing and optimizing HV wiring harness routing, packaging and fixation, and support the selection of HV connectors together with senior engineers.
- Create 3D models, 2D drawings and GD&T specifications under guidance, and support tolerance stack-up analyses.
- Support material selection and manufacturing technology decisions (e.g., die casting, injection molding, sheet metal) for housing and connector components.
- Assist in preparing and executing mechanical design verification plans (DVPs) covering vibration, thermal cycling, IP protection and aging tests.
- Support root cause analysis for mechanical issues on housings, harnesses and connectors.
- Support technical coordination with suppliers and manufacturing partners regarding DFM/DFA and quality topics.
- Actively learn HV mechanical design methodologies, tools and standards, and continuously build up technical competence.

Qualifications & Requirements

Education

- Bachelor's degree or Master's degree in Mechanical Engineering, Materials Science, Automotive Engineering or a related field.
- Excellent fresh graduates with English as a working language are also welcome.

Professional Experience

- Graduation from university plus approximately 1 year of professional experience in mechanical design for automotive components or systems; internship or working student experience with an EV/PHEV OEM or Tier 1 supplier is preferred.

- First hands-on experience in 3D CAD modeling, drawing creation or mechanical testing of automotive components.
- Initial exposure to the vehicle development lifecycle from concept phase to series production launch is a plus.

Technical & Tool Proficiency

- Good knowledge of mechanical design fundamentals for automotive components.
- Basic understanding of HV harness design, connector systems and creepage and clearance requirements.
- Good command of 3D CAD (e.g., CATIA V5 or NX) and 2D drawing creation.
- Basic knowledge of materials and manufacturing technologies such as die casting, injection molding and sheet metal.
- Basic knowledge of automotive test standards such as ISO 16750 and LV 124.
- Familiar with MS Office; first experience with PLM/PDM systems is a plus.

Language Proficiency

- Native proficiency in Chinese.
- Fluent command of English (speaking, writing and reading) for cross-team and cross-border technical communication.
- German language skills are a strong plus.

Core Competencies

- Good analytical and systems thinking ability to address mechanical design tasks.
- Structured working style, highly detail-oriented with strict standards for design quality and technical accuracy.
- Good communication and coordination skills to collaborate effectively with internal teams and suppliers.
- Proactive problem-solving mindset, able to identify technical questions and drive resolution together with senior engineers.
- Highly motivated, fast learner with an open mindset, able to manage multiple priorities in a fast-paced environment.

We are looking forward to your application! Please send us your complete application file in English mentioning your earliest possible entry date by e-mail to: careers@cenergy.asia

工作地点: 天津

招聘人数: 1 人

岗位概述

作为高压零部件壳体、线束与连接器初级机械工程师，你将在资深工程师的指导下，参与纯电动及插电混动汽车高压零部件壳体以及高压线束与连接器系统的机械设计开发工作。你将协助完成三维建模、图纸绘制与公差分析，支持布置与集成相关工作，并与电气、热管理、制造工程及供应商协作。在从概念阶段到量产（SOP）的全项目周期中，你将快速学习高压机械设计方法，支持技术问题攻关，协助确保方案符合主机厂技术规范与汽车行业标准。

主要工作职责

- 参与高压零部件（如逆变器、OBC、DC/DC 变换器、BMS、高压配电单元等）壳体与罩体的设计开发，综合考虑热管理、密封、振动与机械强度要求。
- 协助高压线束的走向、布置与固定设计，并在资深工程师支持下参与高压连接器选型。
- 在指导下完成三维建模、二维图纸与 GD&T 规范，参与公差叠加分析。
- 参与壳体与连接器部件的材料选择与制造工艺（如压铸、注塑、钣金）决策支持。
- 协助制定并执行机械设计验证计划（DVP），覆盖振动、温度循环、IP 防护与老化等试验。
- 参与壳体、线束与连接器机械问题的根本原因分析。
- 参与面向供应商与制造伙伴的 DFM/DFA 及质量类技术协调。
- 积极学习高压机械设计方法、工具与标准，持续提升专业技术能力。

任职资格与要求

教育背景

- 机械工程、材料科学、汽车工程或相关专业本科及以上学历。
- 能将英语作为工作语言的优秀应届毕业生也可投递。

专业经验

- 机械相关专业本科毕业，并具备约 1 年汽车零部件或系统机械设计领域工程经验；有纯电动/插电混动车企或一级供应商实习或学生工作经历者优先。
- 具备三维 CAD 建模、图纸绘制或汽车零部件机械试验的初步实践经验。
- 有从概念阶段到量产启动整车开发周期的接触经历者优先。

专业技能与工具能力

- 掌握汽车零部件机械设计的基础知识。
- 了解高压线束设计、连接器系统及爬电距离与电气间隙要求的基础知识。
- 较熟练使用 CATIA V5 或 NX 等三维 CAD 软件及二维图纸绘制。
- 了解压铸、注塑、钣金等材料与制造工艺的基础知识。
- 了解 ISO 16750、LV 124 等汽车试验标准的基础知识。
- 熟练使用 MS Office；有 PLM/PDM 系统使用经验者优先。

语言能力

- 中文母语水平，听说读写流利。
- 英语流利，可胜任跨团队、跨国界的技术沟通与文档工作。
- 具备德语能力者优先。

核心胜任力

- 良好的分析与系统思维能力，能够应对机械设计相关任务。
- 工作方式结构化，注重细节，对设计质量与技术准确性有严格标准。
- 良好的沟通协调能力，可高效对接内部团队与供应商。
- 积极主动的问题解决思维，能在资深工程师支持下识别技术问题并推动解决。
- 自驱力强，学习速度快，心态开放，能在快节奏环境中管理多项优先级任务。

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careers@cenergy.asia