Construction Kit for Electric Engines

Cluster 1 Project Proposal

Workshop "Powertrain & Electrification"

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Curriculum Vitae Prof. Dr.-Ing. Achim Kampker

Education and Career		
since	2011	CEO of StreetScooter Research GmbH
since	2010	Chairman of the board of ACing GmbH
since	2010	CEO of StreetScooter GmbH
since	2009	Chair of Production Management Werkzeugmaschinenlabor WZL of RWTH Aachen University
since	2006	Member of the board of directors of myOpenFactory eG
2006 -	2008	CEO of an automotive supplier
2004 -	2006	Chief engineer at the Chair of Production Management Werkzeugmaschinenlabor WZL of RWTH Aachen University
2003 -	2004	Team leader of the group "Change Management" at the Chair of Production Management Werkzeugmaschinenlabor WZL of RWTH Aachen University
2002 -	2003	Team leader of the group "Process and technology planning" at the Chair of Production Management Werkzeugmaschinenlabor WZL of RWTH Aachen University
2000 -	2002	Research assistant at the Chair of Production Management Werkzeugmaschinenlabor WZL of RWTH Aachen University
2005 -	2008	eMBA for technology managers (St. Gallen / RWTH Aachen University)
	2004	Phd degree
1995 -	2000	Study of mechanical engineering at RWTH Aachen University







The StreetScooter fulfills future mobility needs

ecologic

Pure BEV zero emission vehicle

economic

Retail price €5.000,-(excl. Battery & VAT) Power 30 kW, v_{max} 105 km/h, Range 45-130 km Consumption < 12 kWh/100 km

flexible

Made for urban needs small - quick - various

Modular built for a high degree of individuality

customized

safe

No cut-backs concerning safety and reliability

Safety



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StreetScooter is a modular build car

Easy derivation of further models using economies of scale



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Modularization in product and process can reduce cost and make electric mobility competitive



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Vehicle derivatives have different requirements for the electric engine



A modular construction kit for the electric engine is required, to fulfill the individual requirements of each vehicle derivative

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"eLab" and "Anlauffabrik": Available equipment shall be used to tap the potentials of integrated product and process development



- Production equipment for the electric vehicle value chain
- Access to a technology plattform
- Assessment of production steps for large scale production



- Preparation and development for series production
- Enhancements in terms of "made for production"

2. Integrated product and process development

 Prototypes of vehicle components will be produced



Analysis of Design-for-X Potentials

3. Assembly

- Improvement of automotive assembly steps
- Assembly of electric vehicle components









Conclusion Competitive Electric Engine Production requires...



- Production focus on par with product planning with an integrated product and process development
- Modularization and standardization starting on component level, resulting in an electric engine construction kit for different power classes
- Practical assessment of product concepts and manufacturing processes in a realistic automotive production environment
- Industrialization and assessment of processes in an expert network
 - Application to the technology and innovation plattform StreetScooter



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Thank you very much.

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