



EV Type Approval, Safety Testing & Standards

There are few aspects of a passenger car which are not subject to Type Approval or Safety Testing. But, despite this it is clear that some aspects necessary for complete coverage of the current automotive market are missing. Where are the standards for EVs?

For example:

- Standards covering the safe usage of high voltage batteries in a vehicle
- Standards for crash tests of vehicles with batteries
- Standardisation of EV charging connectors and cables.

The speed at which OEMs and their suppliers have embraced Electric and Hybrid vehicles (EVs and HEVs) in the past few years means that regulatory authorities have had to rapidly introduce new standards associated with this swiftly developing sector. This briefing is designed to give executives a snapshot of the current situation in type approvals as they apply to EVs. The process is illustrated by way of a case study from THINK, the Norwegian OEM which has been working with electric passenger cars since 1973.

Table of Contents

INTRODUCTION

ESTABLISHING CONFORMANCE

Type Approval

Self-Certification

Practical Implications

INTERNATIONAL AGREEMENTS

Origins

Evolution

EV-SPECIFIC REGULATORY CHANGES & DEVELOPMENTS IN 2010

Areas of Potential EV-specific Testing Requirements

- Safety Testing

- Type Approvals

- Risk Assessment

International EV Regulation: The WFHVR

European Commission Adopts WFHVR Regulation 100

- Overview

- European EV Charging Standards

- European EV Type Approval Standards

- Conclusion

European OEMs Agree New EV Grid Connection Specifications

The North American Situation

- Overview

- An Example of US EV Safety Rule Making

- Charging Standards & Testing

- Safety Standards, EV Deployment & Testing

CONCLUSION

APPENDIX

Sources of Further Information