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I.S. EN 50547:2013

Railway applications - Batteries for auxiliary power supply systems

I.S. EN 50547:2013

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Railway applications - Batteries for auxiliary power supply systems

Applications ferroviaires - Batteries pour systèmes d'alimentation auxiliaire

Bahnanwendungen - Batterien für Bordnetzversorgungssysteme

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This document (EN 50547:2013) has been prepared by Working Group 20 of SC 9XB, Electromechanical material on board of rolling stock, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

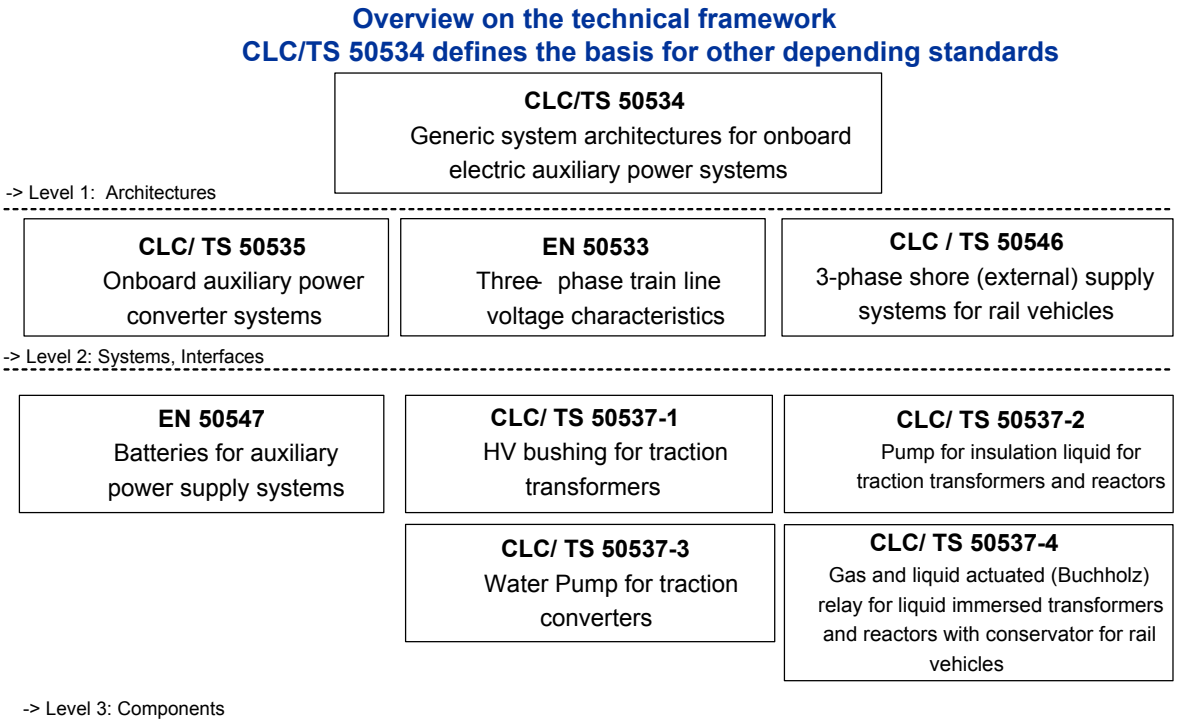
The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-03-04
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2016-03-04

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

EN 50547 shall be read in conjunction with CLC/TS 50534:2010 "*Railway applications - Generic system architectures for onboard electric auxiliary power systems*".

This standardization project was derived from the EU-funded Research project MODTRAIN (MODPOWER). It is part of a series of standards, referring to each other. The hierarchy of the standards is intended to be as follows:



1 Scope

This European Standard specifies rechargeable lead acid and NiCd-batteries for 110 V voltage auxiliary power supply system for railway vehicles.

This European Standard may be applied to other rolling stock types (e.g. light rail vehicles, tramways, metros…) if these are not in the scope of another specific standard.

Others technologies like NiMh or Lithium are not covered by this standard at present.

This European Standard focuses on:

- the description of mechanical interfaces: dimensions of the cells or monobloc batteries, main terminals and preferred sizes of the mounting space of the battery systems for lead acid batteries,
- the description of mechanical interfaces: dimensions of the trays and main terminals for NiCd batteries (as they have different characteristics depending on the technology),
- description of electrical interfaces: capacity, voltage and charging characteristic.

This European Standard restricts the variety of different types provided by EN 60254 and EN 60896 for lead acid batteries and defines the use of cells compliant to EN 60623 and EN 62259 for NiCd-Batteries.

The main objective of this standard is to achieve interchangeability of the battery cells and monobloc for lead acid batteries and the interchangeability of the battery trays for NiCd batteries.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50125-1:1999 *Railway applications - Environmental conditions for equipment - Part 1: Equipment on board rolling stock*

EN 50155:2007 *Railway applications - Electronic equipment used on rolling stock*

EN 50272-2:2001 *Safety requirements for secondary batteries and battery installations Part 2: Stationary batteries*

EN 50272-3:2002 *Safety requirements for secondary batteries and battery installations Part 3: Traction batteries*

EN 50467:2011 *Railway applications - Rolling stock - Electrical connectors, requirements and test methods*

EN 60077-1:2002 *Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules (IEC 60077-1:1999, mod.)*

EN 60254-1:2005 *Lead-acid traction batteries - Part 1: General requirements and methods of test (IEC 60254-1:2005)*

EN 60254-2:2008 *Lead-acid traction batteries - Part 2: Dimensions of cells and terminals and marking of polarity on cells (IEC 60254-1:2005)*

EN 60623:2001 *Secondary cells and batteries containing alkaline or other non-acid electrolytes - Vented nickel-cadmium prismatic rechargeable single cells (IEC 60623:2001)*