

ZVEI information leaflet No. 23e

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Definition of different life time terms for batteries

1. General

In standards, ZVEI information leaflets, technical documentations and brochures various terms referring to statements concerning the life time of batteries can be found. Without underlying definitions these field specific notions can easily lead to misunderstandings and misinterpretations.

For the user it is important to know how long the batteries can be used in the respective application or how many cycles (discharges/charges) can be reached.

Statements concerning the endurance and service life are necessary in order to make product comparisons and economy calculations.

For all statements concerning life time care has to be taken, so that only comparable facts are assessed.

The overview below shall be used to facilitate working with these terms, to define the multitude of the used terms and to achieve a consistent use.

These definitions will be accounted for and used in future for new and revised ZVEI-leaflets.

<p><i>Generic term</i></p> <p>life time Lebensdauer</p>
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Use in Theory	Use in Laboratory	Use in Praxis
<p>design life Design-Lebensdauer</p>	<p>endurance Haltbarkeit</p>	<p>service life Brauchbarkeitsdauer</p>
<p>Value which is deduced considering design and implementation of the single components and the life time limiting parameters from endurance tests</p> <p>Test standard / specification has to be indicated</p>	<p>Values which are measured under defined, in part standardized und in part accelerated conditions</p> <p>Test standard / specification has to be indicated</p>	<p>Values which are established on the basis of field experience under optimized conditions, describing the time in which a specified capacity or power can be used</p> <p>Optimum application and operation conditions, have to be specified</p>
	<p><i>Subtopics</i></p> <p>endurance in cycles Haltbarkeit in Zyklen</p> <p>endurance in overcharge Haltbarkeit bei Überladung</p> <p>endurance in float service Haltbarkeit im Erhaltungsladebetrieb</p>	<p><i>Subtopic</i></p> <p>expected service life erwartete Brauchbarkeitsdauer</p> <p>Calculated values on the basis of field experience and consideration of endurance tests</p> <p>Specific application and operation conditions, as well as additional parameters (e.g. storage) have to be stated</p>

Term to replace

expected life

Terms to replace

endurance life time
cycle life time
float life time

Terms to replace

service life expectation
practical service life



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