

Title (en)
DIAGNOSIS OF BATTERIES

Title (de)
DIAGNOSE VON BATTERIEN

Title (fr)
DIAGNOSTIC DE BATTERIES

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Application
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Abstract (en)
[origin: WO2018178050A1] The invention relates to a diagnostic device (10) for critical changes, particularly pressure changes, gas development and temperature changes, in batteries having multi-layered structures, to a battery system (50) having such a diagnostic device (10) and to a method (100) for diagnosing critical changes of such batteries by means of the diagnostic device. According to the invention, a diagnostic device (10) is provided for determining critical changes to physical properties relative to a target state in battery cells (12) having a structure comprising a plurality of layers (14), wherein the layers (14) are frictionally connected to each other, having at least one receiver (18) and, optionally, additionally, a transmitter (16) for arrangement on the housing (20) and/or cell contact (22) of the battery cell (12), wherein the receiver (18) is suitable for receiving acoustic plate waves (24) and/or acoustic torsion waves (26) and for transmitting a corresponding signal (28) to an evaluating unit (30), which is provided in order to evaluate one or more parameters (32), which are characteristic for an actual state of the battery cell (12), and for comparing them to at least one previously defined threshold (34), wherein exceeding or falling short of the threshold (34) is evaluated as identification of battery cells having a critical change to the physical properties thereof, wherein, in the case of the diagnostic device having a transmitter, the transmitter (16) is suitable for exciting the acoustic plate waves (24) and/or the acoustic torsion waves (26) in the battery cell (12) having a propagation direction along the layers (14).

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