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(54) **DETERIORATION DIAGNOSIS APPARATUS OF BATTERY AND DETERIORATION DIAGNOSIS METHOD OF BATTERY**

VORRICHTUNG ZUR DIAGNOSE DER VERSCHLECHTERUNG EINER BATTERIE UND  
VERFAHREN ZUR DIAGNOSE DER VERSCHLECHTERUNG EINER BATTERIE

APPAREIL DE DIAGNOSTIC DE DÉTÉRIORATION DE BATTERIE ET PROCÉDÉ DE DIAGNOSTIC  
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(56) References cited:

**WO-A1-2016/203655 CN-A- 113 296 010  
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