Abstract

Battery Recyclability Assessment System and Method

A battery recyclability assessment method comprises identifying a volume variation of a battery-under-test; identifying an external surface degradation of the battery-under-test upon the volume variation being determined not exceeding a predetermined volume variation threshold, and obtaining electrical characteristics of the battery-under-test to determine a recyclability of the battery-under-test upon the external surface degradation being determined not exceeding a predetermined surface degradation threshold. Determining a volume variation of a battery-under-test comprises hermetically sealing the battery-under-test in a chamber; filling the chamber with a volume of test air until an air pressure in the chamber reaching a predetermined level and comparing the volume of test air with a volume of reference air corresponding to a reference battery. The reference battery has a specification the same as the battery-under-test. The volume variation of the battery-under-test is determined by a difference between the volume of reference air and the volume of test air.

(Fig. 1)