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EFFECT OF HYDROGEN DECRIPATION PRESSURE ON PARTICLE SIZE OF RARE EARTH BASED ALLOYS FOR Ni-MH BATTERY PRODUCTION

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The effect of hydrogen for decription of the rare earth alloys have been investigated. This paper reports the results of the hydrogenation and decrepitation of as-cast LaNi-based hydrogen storage alloys. The decrepitation for produced the negative electrode of Ni-MH battery has been applied using a combination of hydrogen pressure at room temperature. In a manufactory, the first step of preparation of this negative electrode is the milling decrepitation of huge quantity of lingot alloy. Using The hydrogen at room temperature may be choice for low-cost production of alloy powder for negative electrode for Ni-MH batteries. The effect of hydrogen pressure has been analysed raging from 2 bar to 10 bar of hydrogen pressure. Two alloys was used in this work, La_{0.7}Pr_{0.3}Al_{10.3}Mn_{0.4}Co_{0.5}Ni_{3.8} and La_{0.7}Pr_{0.3}Al_{10.3}Mn_{0.4}Co_{0.5}Ni_{3.8} alloys, both generally used in Ni-MH batteries. In general, both alloys could absorb hydrogen at 10 Bar of hydrogen at room temperature. The partial reduction of hydrogen pressure has been investigated in this work. The decrepitated materials were characterized by scanning electron microscopy (SEM) and also by particle size analyser (CILAS).