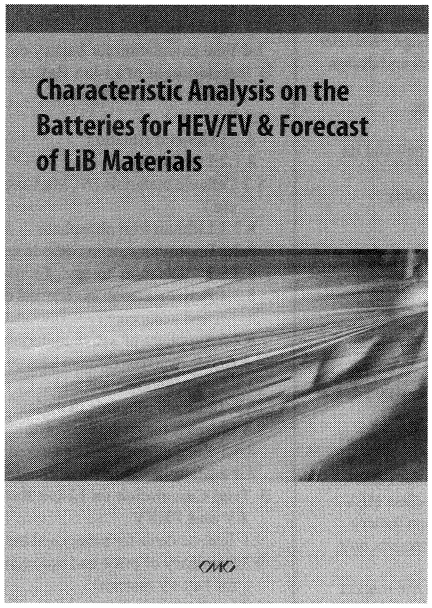
Characteristic Analysis on the Batteries for HEV/EV & Forecast of LiB Materials



■Text : English
■Size : 210mm × 297mm,177pages, soft cover
■Price : 100,000 JPY
■ISBN : 978-4-7813-0252-2
■Published : in May 2010
■Publisher : CMC International Co., Ltd.

Book description

In endeavors to prevent global warming and conserve the environment, reductions in CO_2 emissions have become the challenge to the entire human race and thus whole concept of energy consumption is called into question. In this regard, automobiles that consume fossil fuels in quantity have a significant impact on the global environment, so that the automotive industry is strongly asked to achieve energy saving.

Active product development has been in progress for the next generation motor vehicles, which include hybrid vehicles (HEVs), plug-in hybrid vehicles (PHEVs) and electric vehicles (EVs), and these vehicles have been attracting attention of the general public as these vehicles are expected to contribute greatly to solve environmental problems by changing the way to consume energy by automobiles.

One of the core technologies served for the development and dissemination of the next generation vehicles is battery, the energy source to power these vehicles. Li-ion battery has become an essential part of these next generation vehicles and it is conceived that the adequate ground for supplying automotive Li-ion battery has been already completed. Thus, it is very likely for Li-ion battery that it will develop independently as the mainstream battery mounted on HEVs, EVs and PHEVs starting from the replacement battery for Ni-MH battery now installed in HEVs. Presently, nickel-metal hydride (Ni-MH) battery is used in mass-production HEV models, whilst some EV models recently launched for sale have adopted Li-ion battery already, so that it is expected that Li-ion battery will play a major role in the automotive power battery applications by solving its technical and economic challenges.

As the market for HEVs, PHEVs and EVs is about to grow startlingly, many business enterprises involved in the battery business are concerned with what type of battery will be produced how much and to what extent demand for constituent materials of Li-ion and other batteries would grow.

In its "*Analysis & Demand Forecast on the Materials for Lithium-ion Secondary Battery*" (published in May 2009), CMC Research conducted forecast of demand for constituent materials based on the analysis of Li-ion battery, while in this research report we have focused on the automotive secondary battery, which arrested the eye of interested parties very much in our May 2009 report, and have tried to forecast the required amount of constituent materials of Li-ion battery, when the conventional Ni-MH battery is replaced by Li-ion battery.

Based on several assumptions, in the light of characteristics of battery now adopted in automobiles, trial calculations have been conducted on the required amount of constituent materials at the time when Ni-MH battery is replaced by Li-ion battery. And, we believe in this research report could provide useful and valuable data for engineers in the related industries.

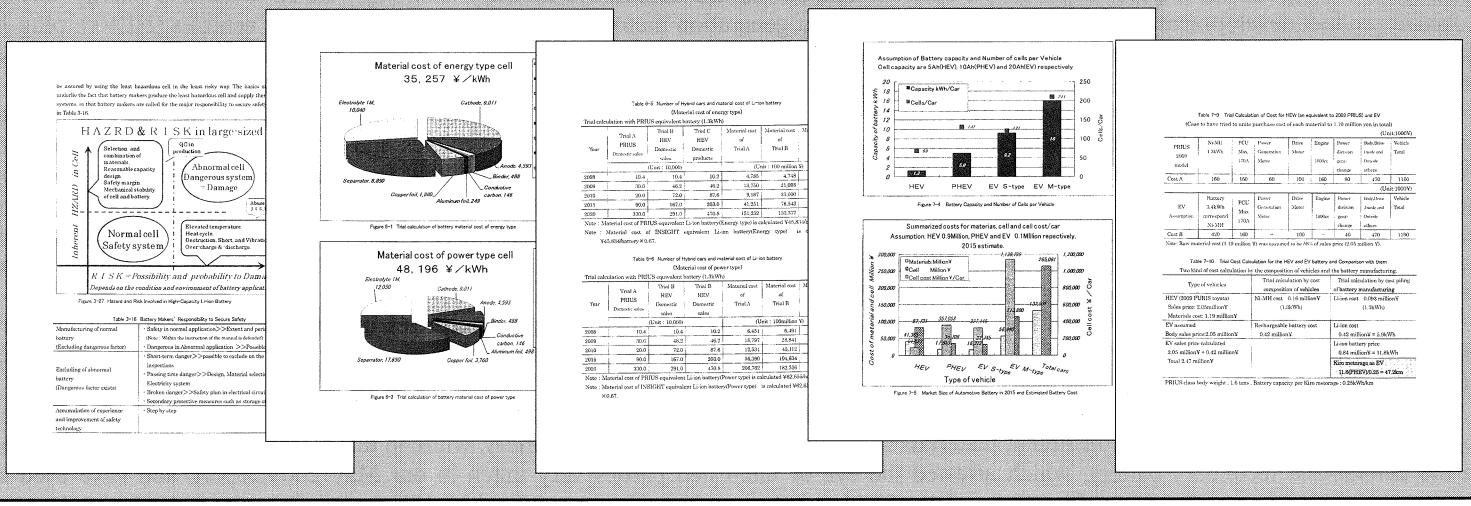
May 2010

Shuichi Sugawara, Technical Analyst, Master of Science, Tohoku University
Kiyoshi Aramaki, Chief Editor, President of CMC Research Co.,Ltd.

Contents

Contents

Sample



CMC International Co.,LTD.
1-13-1, Uchikanda, Chiyoda-ku, Tokyo 101-0047 JAPAN
e-mail : orderint@cmcbooks.co.jp
URL:http://www.cmcbooks.co.jp/