

Electrode Process and Manufacturing Technology for Li-ion Secondary Battery

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Abstracts

The Li-ion secondary battery is classified into the cylindrical battery and the prismatic battery. The Li-ion secondary battery is completed through the process where metal foil (Al or Cu foil) is coated with cathode/ anode active materials, a separator is inserted and rewound between both electrodes and inserted into a metal container, which is filled and sealed with electrolytes. The Li-ion secondary battery is composed of anodes, cathodes, separators, electrolytes, metal cases and other components. A manufacturing process of the Li-ion secondary battery is largely divided into the following three processes.

Manufacturing processes of Li-ion secondary battery can be divided into three as followings.

Electrode process: mixing, coating/drying, pressing, cutting(slitting)

Assembling process: winding, inserting jelly roll and electrolyte, sealing

Inspection and chemical process

This report is about electrode process for Li-ion secondary battery. The general manufacturing process for Li-ion secondary battery is as follows.

Mixing -> Coating -> Roll Pressing -> Slitting (Punching) -> Vacuum Drying -> Assembling -> Aging -> Degassing -> Grading -> Packing

This report covers to Vacuum Drying Process of anode or cathode materials from

Mixing Process

Strong Points

Contains the manufacturing processes for Li-ion secondary battery electrode.

Introduces each equipment used at current battery manufacturers.

Includes equipment specification by each manufacturing process.

Shows examples of equipment.

Contains 199 elusive pictures of equipments and processes.

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