Li-ion Battery Production Line Automation Using Machine Vision Systems

Overview

The system has been designed for monitoring of application process of graphene on cathodic and anodic plate in manufacturing of lithium-ion (Li-ion) batteries. The system highlights and saves the information about application defects during production.

Six smart cameras monitor the production line, measuring the width of graphene coating on the anodic and cathodic film on both sides. The system also measures the areas with inhomogeneous application. The system includes a touch panel, smart cameras, a cabinet with power supplies and commutation.

Features

- Measuring the application width of graphene relative to the plate edges

- Measuring the surface of inhomogeneous areas and alarm generation

- Alarm generation for the operator with error data

- Saving in the data file information about errors including corresponding time/date stamp and plate length

- Generation of daily, weekly and monthly report files on the operation of production line

- Control touch panel

- Possibility of controlling software settings directly from the touch panel

- Wireless communication capability

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