

Battery Management System (BMS) in Electric Vehicle, Mr. P.M.Prabakaran, Senior Test Engineer, Mercedes Benz, Bangalore

Date : 26.04.2020, 10 AM

Sri Krishna College of Technology
[An autonomous Institution] approved by AICTE [affiliated to Anna University]
[accredited by NAAC with 'A' Grade]
Kovaipudur, Coimbatore 641042

INSTITUTION'S INNOVATION COUNCIL
(Ministry of HRD Initiative)

Department of Electronics and Communication Engineering
[accredited by NBA under Tier-I]

Organizes a Webinar on
"Battery management System (BMS) in Electric Vehicles"

Resource Person
P.M.Prabhakaran
Senior Testing Engineer
Mercedes Benz, Bengaluru

EXPLORE ENGINEERS CLUB

Zoom meeting online
Meeting ID: 7710740085

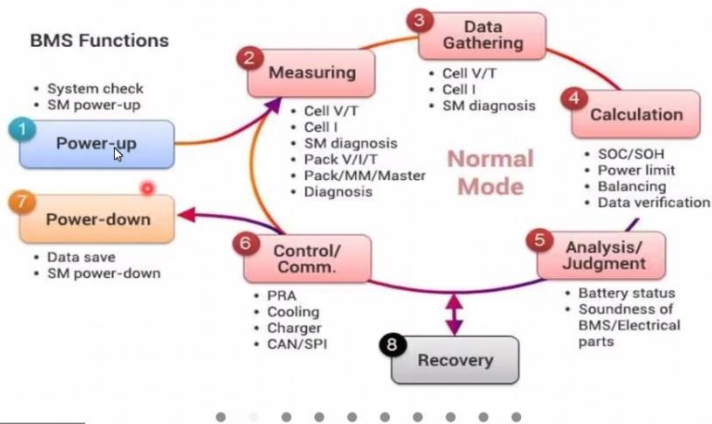
26/04/2020

10.00 am

Department of ECE organized a webinar on "Battery Management System (BMS) in Electric Vehicle" by Mr. P.M.Prabakaran, Senior Test Engineer, Mercedes Benz, Bangalore. He addressed the following topics.

- Introduction about Lithium ion batteries
- Safe operation areas for Li-ion
- BMS, Key functions
- Functionality of BMS
- State of charge
- Balancing & Unbalanced battery Pack
- State of Health
- BMS implementation

BMS Functionality

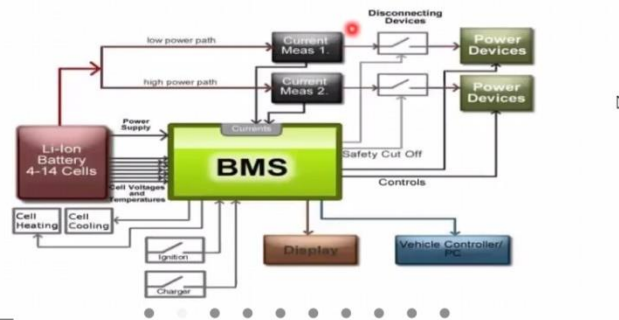


Prabakaran M's screen



Conclusion

BMS is an essential element for the battery to perform surveillance, control, balance and diagnostic in order to not just keep the cells secure state but to collect data that have the possibility evaluate how the battery behave with time.

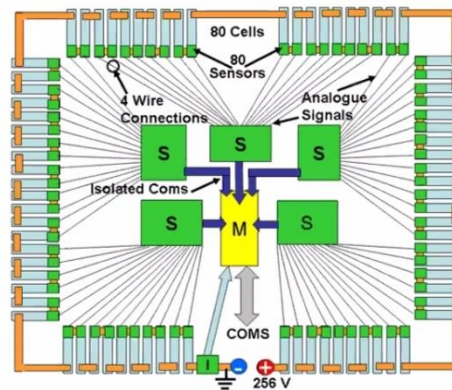


Prabakaran M's screen



BMS Implementation

The Slaves –
Each cell has a temperature sensor as well as connections to measure the voltage, all of which are connected to the slave which monitors the condition of the cell and implements the cell balancing



Prabakaran M's screen

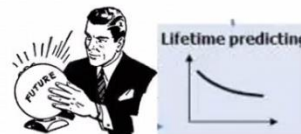
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State of Health (SOH)

- Is a measure to analyze aging processes of the battery
- Is used to evaluate the battery value degradation
- Is an indicator of whether maintenance actions are needed

There are various methods to calculate the battery SOH using:

- battery impedance,
- battery capacity,
- charge/discharge cycles
- and calendar life

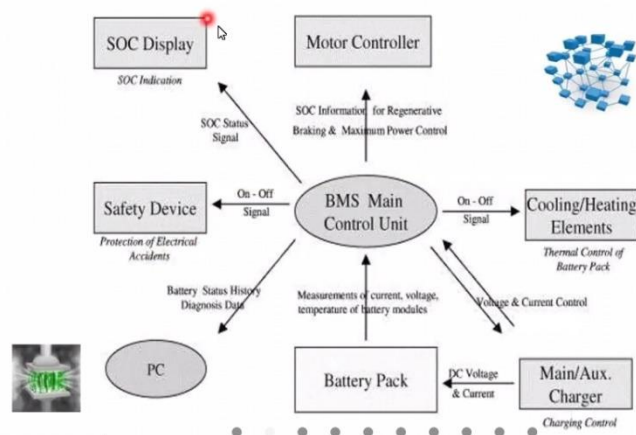


The aim is to predict the battery's healthy state

Prabakaran M's screen

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BMS Key Functions



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