

New mandatory safety tests for electric vehicles

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In news- The Ministry of Heavy Industries has recently announced a list of safety tests that will be mandatory for electric vehicles (EV) manufacturers from April 2023 to receive subsidies under various EV promotion schemes.

List of safety tests-

- Safety test is **applicable on vehicles** produced under the production linked incentive (PLI) scheme for automobiles along with those sold under the Faster Adoption and Manufacturing of Electric Vehicles or Fame scheme.
- The new tests will also be **applicable on batteries produced under the PLI** for advanced chemistry cells (ACC).
- **As per the Ministry, the new tests would ensure quality at three levels**, battery pack, battery management system and cell level.
- **To safeguard human safety, certain tests which are done internationally will be made mandatory from 1st April 2023 for claiming incentives/payments under the PLI schemes** for automobile and auto components.
- **As per the notification, there would be six new tests for cells**, including altitude simulation and temperature cycling.
- **Under temperature cycling test, the reaction of the lithium ion cell is observed** after the chamber temperature is raised and is kept at the high temperature.
- **Altitude simulation**, on the other hand is a test to **observe that the batteries do not explode** or catch fire when stored at a specified absolute pressure and a temperature.
- **There are five new tests in total** at the battery pack

level and 11 new tests for the battery management system.

- These new tests **also including dropping or a free fall of battery packs to observe that the lithium ion batteries do not explode or catch fire** under a range of possible abuses as per international standard - IEC-62133-2'.

FAME scheme-

- The FAME(Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles) was launched by the Ministry of Heavy Industries and Public Enterprises in 2015 to incentivize the production and promotion of eco-friendly vehicles including electric vehicles and hybrid vehicles.
- Two phases of the scheme
 1. Phase I: started in 2015 and was completed on March 31st, 2019.
 2. Phase II: started from April 1st, 2019, will be completed in March, 2022.
- The scheme provides the incentive in the form of subsidies to manufacturers of electric vehicles and infrastructure providers of electric vehicles.
- It is a part of the National Electric Mobility Plan
- Encouraging electric vehicles by providing subsidies is the main thrust of the scheme.
- The vehicles such as two wheelers, three wheelers, electric and hybrid cars and electric buses obtained the subsidy benefit of the scheme. It also covers electric and Hybrid technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles
- **Implementing agency:** Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises.