

E-two wheelers on fire brings safety of Li-ion batteries under spotlight

Updated at March 28, 2022 09:41 IST

Friday, March 26 will go down as a black day in the history of the e-two wheeler industry. In a span of 24 hours, two electric scooter models went up in flames. While such incidents of e-two wheelers bursting into flames, have been on a rise with increasing sales, it's the first one that has claimed two lives. Including the recent ones, over half a dozen cases of e-two wheelers catching fire has been reported in less than a year.

Experts are of the view that given the novelty of the technology and an under developed testing system the government should introduce a mandatory recall policy for EVs.

"It's a new technology, therefore, the ecosystem for a rigorous testing and validation of the vehicles and its parts and aggregates have yet to fully mature and develop," said Balraj Bhanot, former Director ARAI, automobile homologation expert and former chairman –central motor vehicle regulations (CMVR) committee.

"There's a need for a mandatory recall till the technology matures. Why should customers suffer? The manufacturers should be penalised," he added.

The mishap on Friday involved a brand new Okinawa model going up in flames, the second one was a parked Ola S1 bursting in flames. It didn't have any casualties.

It has come to light at a time when battery-powered EVs are being touted as cleaner, greener and cheaper alternatives to their ICE counterparts and getting all the policy thrust from the government.

In an email response a spokesperson at Ola Electric said the company is aware of an incident in Pune that happened with one of its scooters and is investigating to understand the root cause and will share more updates in the next few days.

"We're in constant touch with the customer who is absolutely safe.

Vehicle safety is of paramount importance at Ola and we are committed to the highest quality standards in our products. We take this incident seriously and will take appropriate action and share more in the coming days," said the spokesperson.

An Okinawa spokesperson said the "investigation is underway and the company will be able comment only after it's concluded. As reported by the local media, the Okinawa incident that claimed the lives of a 49-year-old man and his 13-year-old daughter happened in Vellore district while the scooter was plugged in for charging.

India has close to a million EVs on the road and its growing leaps and bounce. While one may argue that the incidents are far and few for a technology that is new not only in India but also globally, it doesn't take away the criticality of rigorous testing, said experts.

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There are a number of new entrants with static electronics back ground. Most of them import kits from China, he said. “They do not have full battery testing infrastructure and limited knowledge in auto electronics. Battery management and packaging knowledge is lacking,” said Bhanot.

An official at a testing agency which is responsible for testing and validating vehicles said, the reasons for the fire can be manifold. It would be premature to arrive at a conclusion without a thorough investigation, said an official at a testing and certification institute. “The issues facing this market (fire) is not unique given the novel technology. We expect more standardised norms as we go along,” he said.

The BMS is the heart of an EV comprising of a hardware and software interface that controls power supply to a battery pack’s underlying cells, as well as the charging speed and voltage. It’s the BMS that controls the power cut-off point when charging batteries, which is crucial in preventing them from overcharging. This not only helps maintain the claimed longevity of a battery, but also prevents it from exploding.

Sohinder Gill, director general, Society of Manufacturers of Electric Vehicles said the EV makers need to ensure that such incidents either do not happen or remain controlled and contained as rare events.

“We at SMEV are constantly in touch with the willing OEMs (original equipment manufacturers) to exchange the latest research findings and the actions being taken by various agencies world over to have safer EVs,” said Gill.

According to him 100 per cent safe batteries is a global quest for EVs. Some of the possible ways of handling this critical concern of EV users are- switching from less volatile chemistries to safer ones and multi-layered safety design that can try and stop or at least reduce the propagation of fire.

Suhas Rajkumar, founder Simple Energy which launched its first electric scooter in August last year, says his firm has been advocating a more intense dialogue around safety of EVs.

“Quite a few people in the EV industry haven’t understood the basics of how to make a battery pack and the varied safety layers it involves.