

CONVERSATION



Mr. Mahesh Wagle
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Q. What is your view on the current state of the Indian EV battery industry, and how is Cybernetik positioning itself to lead the industry?

Indian EV battery industry is taking rapid strides in the right direction as is amply evident from the rising numbers of EVs – two-wheelers, cars, and buses. Battery capacities are improving and so are battery life, range, and safety. Range anxiety continues to be a major deterrent, but its fear factor has come down with longer-range batteries. Policy support is strong for battery swapping, which is a great alternative to lengthy recharging. Software for battery management is improving and will further add to the allure of this eco-friendly transport option. The discovery of “inferred” Lithium deposits in India will further propel the industry forward by reducing our dependence on costly imports, the supply chain for which is vulnerable for a wide variety of reasons.

Customized automation which caters to highly individualized needs is Cybernetik’s specialty. Our focus is on high-quality automation that delivers safe batteries with long life and range. The total quality parameter tracking system we use for EV battery assembly, for example, delivers such robust batteries in the least possible time. What we also do is introduce tailored innovation at every possible step and integrate it with the overall setup.

Q. Can you elaborate on the total quality parameters tracking system in place for your battery assembly lines and how it ensures long battery life for EVs?

Total quality parameter tracking keeps a note of all the quality-related data generated at all the individual stations during assembly and maps the same to the finished battery. As a result, the complete dataset of every single assembled battery is available. End-of-Line (EOL) testing checks if these data values are acceptable. This optimizes battery life and performance.

Speaking of individual stations, the data obtained from testing the individual cells is used to stack cells with similar output inside a battery. This improves inter-cell compatibility, which, in turn, pushes up the battery life.

Another example is data available from Weld Integrity Testing. It is important to note that weld quality directly affects the life and safety of EV batteries. It is critical to test and check each weld joint to evaluate its readiness.

Q. How does the regenerative discharging system implemented in your assembly line save electricity, and what impact does this have on the overall cost of production for EV battery manufacturers?

End-of-Line (EOL) testing involves charging and discharging of the entire battery pack to check its performance. The Regenerative Discharge System returns power to the grid during the discharge phase of EOL testing. This reduces the electricity required for overall battery pack assembly.

Q. How do you keep up with the battery industry needs and ensure your assembly lines are up-to-date?

Teams from Cybernetik attend various EV industry events and interact with a cross-section of authority figures. Such interactions help us understand the current developments and challenges in this sector. We also make it a point to note the concerns that potential clients discuss with us and the feedback that clients leave after erection and commissioning. Thereafter, we convey these to our technical team. The Weld Integrity Testing station was a result of the feedback we received.

Speaking of our technical team, we recently completed an EV battery assembly project that involved co-development with an OEM. This was a great learning experience that took us past many hurdles. One such issue that we solved was the prevention of damage to the weld electrode due to a subsystem built to ensure uninterrupted operations.

Q. How do you approach sustainability in your manufacturing unit?

Optimizing resource use is our mantra for sustainability. As a company that has innovation as part of its DNA, we are always on the lookout for better and more efficient ways to do things. We start at the design phase where we adopt a 360-degree approach to factor in an entire ecosystem of functionalities. One of the objectives of this approach is to minimize the use of resources – materials, power, and the like. The Regenerative Discharge System, for example, saves electricity.