2026 Indian EV Coating Trends: Why Surico is a Leading Electric Vehicle Coating Line Manufacturer in China

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Executive Summary: The Intersection of Innovation and Infrastructure

As the global automotive industry accelerates toward electrification, the demand for advanced EV manufacturing infrastructure continues to grow rapidly. In India, the expansion of the electric vehicle sector is driving strong demand for high-performance coating and finishing systems that can meet modern production standards. **This shift is not only about vehicle appearance, but also about improving corrosion resistance, durability, and production consistency in an increasingly competitive global market.**

As manufacturers expand production capacity to support national electrification goals, investment is increasingly shifting toward automated coating systems that improve efficiency, reduce waste, and deliver consistent finishing quality. Recognizing these evolving industry requirements, **Jiangsu Surico Machinery** has positioned itself as a leading Chinese manufacturer of electric vehicle coating line solutions, providing integrated systems tailored to the needs of modern EV production. The company delivers integrated coating solutions designed to meet the efficiency, quality, and environmental requirements of India’s rapidly growing EV manufacturing sector.

Advancements in Indian EV Finishing Requirements

The Indian EV market is moving beyond its early growth stage and entering a period of large-scale industrial expansion. From 2026 onwards, the industry is expected to place greater emphasis on intelligent, energy-efficient, and environmentally sustainable coating technologies.

Automation & Efficiency: Traditional manual processes are rapidly being replaced by automated coating lines that reduce material waste, lower energy consumption, and improve production efficiency. These advantages have become essential for modern EV manufacturers seeking long-term operational stability**.**

Environmental Resilience: Coating performance must remain stable under a wide range of environmental conditions, including extreme temperatures, humidity, and long-term exposure to corrosive environments**.**

Functional Performance and Aesthetics: In passenger vehicle manufacturing, paint quality plays an important role in product appeal. At the same time, functional performance - including corrosion protection and thermal stability - remains equally important for long-term durability.

Modular Architecture: EV manufacturers in India are increasingly adopting modular production systems that can be expanded or reconfigured as production demand changes. The ability to scale coating capacity without major facility reconstruction provides significant operational flexibility and cost advantages.

As production requirements become more complex, customized engineering solutions are becoming increasingly important. Advanced filtration systems, precise temperature management, and automated spray technologies help reduce rework rates while improving overall production throughput. **In a market that remains highly cost-sensitive while demanding consistent quality, these technical capabilities provide manufacturers with a strong competitive advantage.**

Technical Proficiency in EV Coating Systems

The core of a successful finishing operation lies in the technical configuration of the **Electric Vehicle Coating Line. These aren't "one-size-fits-all" solutions;** they are designed to handle various vehicle architectures, from passenger cars to heavy-duty structural components.

The performance of an **electric vehicle coating line** is primarily determined by its system configuration and process design. **These systems are not standardized solutions**, but engineered platforms designed to accommodate different structures, ranging from passenger vehicle bodies to heavy-duty structural components.

The Multi-Substrate Challenge

A key requirement in EV coating systems is the control of PTED processes, which ensure full corrosion protection across all vehicle structures. **Modern EVs combine multiple materials, including steel, aluminum, and plastics, to reduce overall vehicle weight. As a result, coating systems must be capable of handling different substrate types within a single integrated production line.**

Surico's system design emphasizes strict environmental control and precise process synchronization throughout the coating line. In an EV coating line, airflow must be precisely controlled to prevent

contamination, particularly during high-gloss finishing processes for passenger vehicle applications.

Key Technical Performance Benchmarks for 2026:

Advanced Paint Booth Technology: Advanced paint booth systems ensure efficient overspray capture, improving surface finish quality while reducing environmental impact.

Micron Consistency: Maintaining consistent coating thickness at the micron level across complex geometries is a key indicator of advanced engineering capability.

Throughput Optimization: Optimizing the balance between production speed and coating precision is essential when evaluating high-performance EV coating systems.

Strategic Projects Across International Markets

The real measure of engineering capability lies in its performance in real-world industrial applications. The reliability of coating systems is best validated through deployment across diverse international manufacturing environments. Surico has delivered a range of coating line projects tailored to the specific requirements of different regional manufacturing markets.

Region

Project Focus

Application Outcome

India

Passenger Vehicle

Supported local manufacturers in achieving consistent finishing quality aligned with international production standards

Vietnam

E-scooter Paint Shop

Optimized for high-volume production with rapid color change capability

Serbia

Plastic Machinery

Validated durability and chemical resistance for non-metallic substrates

In India, EV coating line implementations have focused on full system integration, ensuring that chassis structures and internal frames receive the same level of corrosion protection as exterior body panels. In contrast, Vietnam’s high-volume two-wheeler market places greater emphasis on production efficiency and flexible color change capabilities. In Serbia, coating systems for plastic components are designed to ensure strong chemical resistance and long-term durability under industrial operating conditions.

Surico's global project experience continues to inform product development for 2026, ensuring that systems remain aligned with evolving international manufacturing and environmental standards.

Enhancing Production with Structural Components Coating Lines

While exterior surface quality is important for vehicle appearance, the coating of structural components plays a critical role in long-term durability and operational safety. Protective coating systems for structural components are essential for maintaining vehicle reliability throughout its service life. These components are continuously exposed to moisture, road contaminants, temperature fluctuations, and corrosive operating environments, making robust coating protection essential.

A specialized structural components coating line must be:

Robust: Capable of handling heavy loads.

Thorough: Ensuring complete coverage of intricate welds and joints.

Safety-Centric: Engineered to meet stringent safety requirements, particularly for EV battery housings and lower chassis structures.

By integrating automated conveyor systems and robotic coating equipment, manufacturers can move structural components through cleaning, coating, and curing processes with minimal manual handling. This approach helps improve process consistency, reduce production errors, and support the high reliability standards required in modern EV manufacturing.

Organizational Excellence and Quality Management

Advanced equipment is built upon mature quality management systems and strong engineering foundations.

Industrial coating systems at this scale involve far more than equipment manufacturing alone. Their successful implementation depends on multidisciplinary expertise in fluid dynamics, thermal management, and chemical process engineering.

Surico maintains a stable and standardized quality management framework to ensure that every project meets relevant technical and engineering requirements.

Within the B2B manufacturing sector, recognized certification systems remain an essential foundation for customer trust. Comprehensive certification standards help ensure compliance with international safety and performance requirements, which are also critical expectations for major automotive OEM partnerships.

Supported by a transparent and reliable quality management system, Surico has developed long-term cooperative relationships across India, Europe, and Southeast Asia.

Trends in Automation and Digital Engineering for 2026

Looking ahead to 2026, the integration of **digital twin technology** and **generative design** is expected to become increasingly common in coating line planning and system engineering.

By simulating coating line performance in a virtual environment before physical installation, Surico's engineering approach enables manufacturers to:

Identify potential issues related to airflow distribution and thermal behavior.

Reduce installation time and on-site commissioning effort.

Optimize factory layout and equipment footprint, which is particularly important in space-constrained manufacturing environments such as India.

In addition, the shift toward smart coating systems is driving wider adoption of sensor-based monitoring and real-time process control technologies. Key process parameters such as spray booth humidity, paint viscosity, temperature stability, and airflow conditions can be continuously monitored and adjusted to improve coating consistency and reduce defect rates. This development in manufacturing technology is strengthening the role of advanced coating system providers as key partners in next-generation electric vehicle production.

Industrial Capability and Market Competitiveness

The competitiveness of a coating system is no longer determined solely by initial investment cost, but by its long-term **total cost of ownership (TCO)**. For EV manufacturers, key factors such as energy consumption, paint utilization efficiency, maintenance requirements, and production stability directly impact overall lifecycle cost. Although high-end coating systems require higher upfront investment, they can significantly reduce operating costs over time through lower material waste, reduced energy consumption, and decreased downtime.

For manufacturers competing in the global EV market, investment in advanced coating infrastructure has become a long-term strategic decision rather than a short-term capital purchase. By adopting systems engineered for long-term durability and stable operation, production facilities can maintain consistent output and reduce unplanned downtime over extended operating cycles.

Surico's engineering capability is built on continuous development experience and long-term alignment with evolving EV manufacturing requirements. Through ongoing optimization of coating technologies and system design, the company continues to support the changing needs of global electric vehicle production.

Conclusion: Engineering the Future of EV Coating Systems

The future of EV finishing in India is defined by a shift toward higher technical standards and more integrated manufacturing processes. In 2026, the reliance on automated and high-precision coating lines continues to increase across the industry.

Manufacturers that work with experienced equipment providers are better positioned to

navigate the challenges of the ongoing EV transition. With a combination of international project experience, a strong focus on structural integrity, and a commitment to quality management, Surico continues to support manufacturers in upgrading their production capabilities. **By delivering systems capable of handling applications ranging from passenger vehicles to complex industrial components, the focus remains on supporting the development of the EV manufacturing industry through reliable engineering and technical expertise.**

Discover more at: https://www.ispraybooth.com/

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