



Mercedes-Benz

Mercedes-Benz long-term invests in Vietnam with world's top painting facility

Press Information
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17 July 2013 - Mercedes-Benz Vietnam today officially opened its technically most advanced and ecologically friendly electro-dipping coating facility, worldwide, in Ho Chi Minh city. The opening ceremony was witnessed by around 100 official guests from the government, business partners and media.

Starting construction in November 2011, this electro-dipping coating facility is an investment of nearly 10 million U.S. dollars. Vietnam is the Mercedes-Benz's pilot country for this type of plant. This foreign direct invest underlines the companies clear belief in the automotive market in Vietnam.

Mr. Ngo Van Tru, Deputy Director General – Ministry of Industry and Trade, attended the opening and said that the government appreciated the Mercedes-Benz's long-term investment in Vietnam and affirmed Mercedes-Benz to be a part of Vietnam's auto DNA.

The German government was represented by HCMC - German Consul General Dr. Hans-Dieter Stell. He underlined the beneficial effects of technology transfer to Vietnam in increasing the competitiveness of the Vietnamese economy. *"Mercedes-Benz with its longstanding presence in all parts of the country is an essential partner of Vietnam in this regard,"* he said.

Top officials of the company were present on this occasion, including Mr. Peter Alexander Trettin (President & CEO of Daimler Central/Eastern Europe Africa & Asia in Stuttgart, Germany). *"We not only introduce the safest and most luxurious vehicles to Vietnam's customers, but the most advanced ecologically friendly German technology to this country as well. Vietnam is one of our production plants worldwide. We highly appreciate this market and commit to a long-term investment."*

Under pressure from a decreasing tax for imported car from now to 2018, some manufacturers are moving their investment to other countries in region. *“We stay”, says Michael Behrens, CEO and General Director of Mercedes-Benz Vietnam. “As opposed to other luxury brands who only import, we are a true corporate citizen of Vietnam, bringing ecological, technical benefits to our host country. No other manufacturer uses this type of ecologically friendly painting facility in Vietnam. We are pioneer once again”.*

Page 2

Mercedes-Benz is the only luxury manufacturer to partially assemble vehicles in Vietnam. It has been certified and proven as a top quality factory within the Daimler family. It is a responsible brand in the luxury segment being among the top tax-payers in Ho Chi Minh city. “The three-pointer star” of Mercedes-Benz produces in responsible ways.

The electro-dipping coating facility of Mercedes-Benz Vietnam

Page 3

Located inside the Mercedes-Benz Vietnam factory at Govap District, Ho Chi Minh city, the facility was built on an area of 5,000m.². The two main parts of the electro-dipping coating facility are the surface pre-treatment and the actual electro-dipping coating. With top-of-the-line so called Zircobond technology using zirconium transitional elements usually seen only in spacecraft production, the line ensures that car bodies are heat-proof and corrosion-resistant. The key advantage of the facility is its extreme environmental friendliness. The electro-dipping coating facility eliminates heavy and extremely hazardous metals such as nickel, zinc or manganese, decreases clean water usage by 40%, electrical energy by 40% and wastewater by 30% compared to traditional phosphate coating technology.

The electro-dipping coating facility of Mercedes-Benz Vietnam can paint many types of chassis and structural components. This facility will be used for the locally manufactured body frames of GLK, C-Class and E-Class. After installing the plant in Vietnam, Daimler will further spread this technology to other countries.

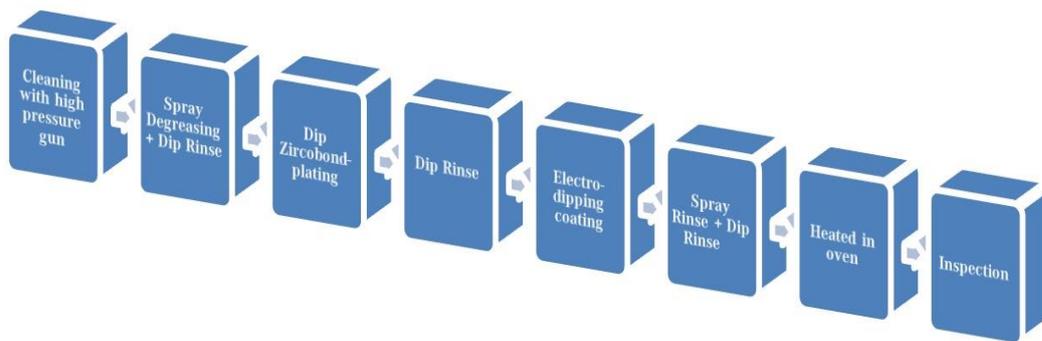
Each frame will traverse through two main phases: Phase 1 is the surface pre-treatment and so-called zircobond plating; Phase 2 is electro-dipping coating. In the first stage, each frame will be cleaned with a high pressure water-gun to remove dust on the surface. Next, the chassis is embedded into the solution tanks for degreasing and cleaning of remaining residue. At this point, the chassis is ready for the zircobond plating process. As a result, the chassis will have a protective layer which is resistant to corrosion and oxidation. In phase 2, the zirconium atoms and paint additives will follow the electricity current adhering to the chassis and create a protective layer with the thickness of 15-30 microns, guaranteeing absolute corrosion resistance and lasting connection with the surface coating. *“This is the most advanced type of technology in Vietnam and Asia”*, says Patrick Schwind, Technical Director at Mercedes-Benz Vietnam.

To finalise the whole process, each chassis traverses 16 small steps, including 9 steps of phase 1 and 7 steps of phase 2, in total for 10 times dipped into the tanks. The whole cycle takes 120 minutes.

Futhermore, the entire wastewater and sludge will be moved to the water treatment system to ensure there is no substance is discharged into the environment. The electro-dipping coating facility uses the so-called RTO polluted air treatment (regenerative thermal oxidizers). All air from the facility will be filtered and burned completely. Moreover, to save electricity, the facility is equipped with a transparent roof and wall.

Page 4

Zircobond Electro-dipping coating process



Zircobond technology is the newest ecologically technology for surface treatment for multi-metal systems used in the automotive industry. It was developed to substitute the system of pretreatment of tri-cationic phosphating which uses some heavy metals such as zinc, nickel and manganese. This new technology allows considerably to reduce the size of the installation, the process and all the involved costs and aggregates in the painting process.

Electro-dipping coating is a method using electrical energy to apply organic finishes by dipping the subject to designed tank. The subject is grounded and immersed in paint that has been charged with the opposite polarity. Resin and pigment migrate to the subject, and a uniform film is irreversibly deposited. The subject is rinsed, then cured.