



New system for refrigerator coating

Cool solution for flexible, reliable powder coating

Additional capacity, flexibility and quality are the most important requirements on the new coating system at Godrej. The company already has more than 15 years of experience in electrostatic powder coating. For its facility in Mohali, Godrej decided to turn to a new supplier and invested in a system from Gema. The system has been in operation for several months, and the results are convincing in every respect.

Godrej manufactured the first refrigerator in India back in 1958, and much has changed since then. Polyurethane insulation makes the cooling effect more efficient, the refrigeration technology has become more eco-friendly, and there is a wider selection of colors. Godrej has developed into a leading brand in India not only for household appliances. Just in its factory in Mohali, in the Indian state of Punjab, it manufactures 5000 refrigerators each day, which means

one unit leaves the production line every 9 seconds. This is a product that must satisfy the highest requirements for reliability, environmental protection and attractiveness. Godrej has continually developed the technology for this product over decades. Electrostatic powder coating has also been used for surface finishing since 1996.

In 2011, Godrej decided to work with a new supplier and now uses systems

from Gema for powder coating. In Mohali, a MagicPlus quick color change system was installed in a new manufacturing facility.

The first requirement at Godrej is high production capacity and flexibility. Demand for refrigerators is considerably higher in the summer than in the wintertime, and products cannot be manufactured in these volumes ahead of time because warehousing would be far too expensive. Because of its high reliability, the Gema system is so flexible that during the course of a year 1.3 million refrigerators can be manufactured in seasonal batches.

Today, the refrigerators are offered in ten colors, four of them in shades of red. In the future the number of colors for new models will increase to 35. The time needed to change color is thus an important factor for the system's cost-effectiveness. With the Gema system, a simple color change takes 15 to 20 minutes, and an extreme color change from bright to dark or the reverse can be done in 25 minutes. These are clearly better results than the ones achieved with the systems from the previous supplier.

This also applies to system operation and the cleanliness of the environ-



ment. Employees are enthusiastic because they find it much easier to apply the coating as well as to do cleaning compared to the previous coating system. Perfect airflow prevents powder from escaping the system, and the area around the system remains much cleaner.

For Godrej, the quality of the coating is just as important as the system's capacity and flexibility. For refrigerator surfaces, primarily epoxy/polyester powder with layer thicknesses of 45 to 60 µm is being processed. This is where the proven electrostatics from Gema come into play. Coating guns with ex-

cellent transfer efficiency achieve an optimal application of powder, and the coating process is regulated very precisely with easily manageable control components. This results in a surface quality that meets even the highest requirements for aesthetics.

Godrej is very satisfied with its decision to purchase the Gema system. Thanks to the system's performance, Godrej is able to manufacture refrigerators reliable and with the highest quality adapted to the seasonal demand.

SYSTEM DATA

- 1 MagicCompact quick color change booth
- 1 Control cabinet with coating guns and axis controls
- 16 Automatic coating guns
- 2 Hand coating guns
- 2 Reciprocators
- 1 Powder station
- 1 Control system

THE COMPANY

Godrej is as much a part of India as the kurta, the collarless shirt worn mostly by men. It is one of the best known brands on the Indian subcontinent, and the range of products marketed under this name extends from industrial technology to household appliances, furniture, security systems and landscape maintenance through to consumer goods. More than 500 million Indians use these products every day. The Godrej Group operates at seven major locations in India and is active in 60 countries. The company has sales of more than USD 3.3 billion, of this 25 percent abroad.

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