

Flexibility Analysis and Adhesion Modeling on Multi-layered Coatings

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Extended Abstract

Multi-layered coatings used to be utilized for the industrial products in order to achieve the several performances in one component. Recently, flexible multi-coatings are emerged in the display market, such as a flexible display, a foldable display and a roll-able display.

However, one of the problems in the product is that it would be difficult to design the structures satisfying the requirements, especially the strength of the layers.

In this presentation, the theoretical approach using an original CAE and the modeling approach using rheological properties will be provided based on the background.

1. It would be frequently difficult for Packaged CAE Software to solve the complicated problems including boundary conditions.
2. The reliable model to predict the adhesion would be necessary to predict the performance accurately and design the materials appropriately.
3. Theoretical approaches would be necessary to estimate the total performance of multi-layered coatings.

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