

## **252e Discrete Element Model of a Horizontal Pan Tablet Coater**

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This paper presents both the models and results from soft-particle, discrete element method (DEM) computer simulations used to investigate tablet coating in a horizontal pan coater. The model simulates the dynamics of 15,000 tablets (both spherical and biconvex shapes were used) in a horizontal rotating cylindrical drum with conical end caps, two baffles, and four slip bars. The model is used to predict the trajectories, orientations, and speeds of the tablets for a variety of drum rotation speeds and fill levels. In addition, the applied coating thickness and uniformity are estimated with the model. The results of the simulations are compared to experimental data.