

**DEM simulation of agglomerated particle behavior in pan-type pelletizer  
using liquid bridge model**

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Particle behavior in a pan-type pelletizer was simulated by discrete element method (DEM). In order to represent the effect of added water to adhesive force, liquid bridge model was also included to the simulation. To investigate detailed behavior of various sizes of particles in pan-type pelletizer, agglomerated particles in five representative particle sizes were simulated by DEM in this study. Velocity and trajectory of several size of particles was compared with experimental results obtained from image processing using high speed camera and their results were consistent each other. In particular, simulation results showed that large particles tended to be located in bottom side of pan and upper side of particles layer, which coincided with the trend obtained from experiments.