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Predicting scuffing by modeling bottle movement on a multi-track conveyor.

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The South African beer industry encourage customers to return empty 750ml beer bottles to retailers and receive a refund for recycled bottles. These bottles are then re-used, but after multiple cycles the bottles eventually exhibit visual signs of scuffing – an opaque ring at the base and sometimes shoulder of the bottle. Scuffing is correlated to bottle explosions during the refilling process. A simulation model is developed to examine the number of collisions and contact duration of bottles on a conveyor system. The model includes bottle-to-bottle, and bottle-to-barrier collisions. An initial bottle trajectory visualization tool developed with Wolfram Mathematica® software will be presented.

Apply to be considered for a student award (Yes / No)?

No

Level for award (Hons, MSc, PhD, N/A)?

N/A

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