

## Automated Tray Filling System



### Application / Equipment Details:

- NBE CSO: E902390009
- Material: Brake Pad Material
- Bulk Density: 36.2 lbs/ft<sup>3</sup>
- Characteristics: Sluggish flowing, very cohesive
- Filling Rate: One tray/minute – 26 lbs/tray

**Application Overview:** For this application, a repeat NBE customer was looking for help in adding some automation to a very manual process. The customer is making brake shoes. The customer would manually fill trays with 26 lbs of the brake pad material that would then be placed on carts and transferred to a press line where the shoes would be molded.

For this new process, NBE proposed a semi-automated process where the raw material, received in the customer's rolling tote, is discharged into the process using a high lift sealed container discharger. The material is discharged into a loss in weight feeder system that is designed to accurately provide the desired batch amount. The customer will manually stage 10 empty trays, 5 per side, into the infeed conveying system.

The empty trays are indexed into the filling zone where the ingredient is metered in. The filling system incorporates a sweeper inside the tray that moves from side to side while filling to provide a uniform fill level in the tray. A pneumatic pusher mechanism then pushes the filled tray onto an accumulation conveyor system where the operator can then remove them and prepare them to go to the press.

Once the 10 trays are filled, the operator will load new trays and the process begins again.



# Real Results



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