



Research Paper

Reclaim Power and Geometry of Bin Interfaces in Belt and Apron Feeders

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Based on common sense measures and a simplified physical model, some design criteria are given for achieving proper dimensioning of bin interfaces in the case of belt and apron feeders. How the reclaim power closely related to wear, depends on the geometry of the interface between silo and feeder is discussed. The characteristics of both declined and inclined feeders are included in the analysis. From this it is estimated to what extent the performance of inclined feeders differs from that of horizontal ones.

In an earlier publication [5] an approximate analysis was developed for the dimensioning of bin openings having horizontally positioned belt or apron feeders underneath. Even so, the author has still seen feeders malfunctioning for several reasons. Therefore, in what follows, more attention will be paid to these feeders, including flow promotion measures, to the dimensioning of the bin aperture and to the estimation of the required reclaim power.