



Research Paper

The "Bins & Bunkers Research Group" at the Technical University Clausthal

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The Bins and Bunkers Research Group at the Department of Mining at the Technical University Clausthal, Federal Republic of Germany, was established in 1955. Since that time its main activities have covered and have been mainly centred around the following six aspects of bulk solids handling:

- Flow behavior of bulk solids.
- Design of hoppers, bins and bunkers.
- Segregation phenomena relating to the storing of bulk materials.
- Load calculations and measurements in hopper and bunkers.
- Determination of discharge quantities from storage.
- In-bin blending and the use of flow corrective inserts in hoppers and bins.

In almost every branch of the processing industry it is necessary at some stage in each process to store bulk materials in devices such as hoppers and bunkers. The movement of bulk material discharged from hoppers and bunkers is typically irregular and the amount of particle to particle segregation which occurs is dependent principally on the hopper shape, the type and size of the outlet and the physical and chemical characteristics of the stored material. General design considerations concerning these matters are given by H. Wöhlbier [27, 28] and Reisner [12]. An excellent survey of the state of research relating practical design

and techniques based on flow properties of bulk solids is given by Reisner and von Eisenhart Rothe [18].