J.B.P. ENGINEERING CORP DESIGN * MANUFACTURING * INSTALLATION ABRASION-RESISTANT CONVEYING AND MATERIALS HANDLING SYSTEMS

A subsidiary of The Greenbank Group, Inc.

Modern Transfer Chute Designs

- For Use In Material Handling

Correctly designed and engineered transfer chutes form an integral part of <u>all Bulk Materials</u> <u>handling systems</u>. Their function has often been viewed simplistically by designers and in many material handling schemes they do not receive the attention they require as a key item of plant. The result of such thinking is degradation of material, increased spillage at the loading points, and generation of dust, increased wear on conveyor belts and components and increased power consumption. Additional cost may include cleaning of spillage, demurrage, increased costs for maintenance and repair together with increased risks of fire due to airborne dust and spillage.

Modern thinking on chute design indicated that gently guiding the material in the direction required is far better than intervention type chutes i.e. chutes of a square box design that use deflector doors or impact to turn or deflect the material flow. The maintenance problems of sticking diverter doors are eliminated and the availability of the system is greatly increased by the use of swinging chutes.











The benefits of the **Curved / Half-Round Chute®** designs can be summarized as follows:

- The trajectories of the material can be plotted using conventional methods of calculation and the use of **Discreet Modeling Analysis** shows in detail the flow paths of conveyed material and entrained air allowing the chute to be designed to:
- Turn the material stream in a controlled manner keeping potential fugitive material within the main stream
- The use of half round construction eliminates dead corner areas where material starts to build up causing blockages
- Maintaining optimum chute angles promotes flow and centralizes the material within the chute delivering the stream of material centrally and at the same speed and direction as the receiving belt.
- Eliminates the need for costly impact sections.
- The profile of the material delivered by half round construction gives increased belt edge clearances and eliminates spillage and fugitive dust
- Substantially increases belt and component life
- Reduces downtime and costly maintenance
- Can be lined with a variety of materials including ceramics for enhanced life expectancy
- CBP Engineering utilizes its own in-house design, fabrication and lining experts



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