



MATERIAL HANDLING

Fines and broken product are often found to be caused by:

- Selection of wrong conveying equipment
- Drop of product into silo or bin
- Product is caught between different moving machines
- Rotary air locks
- Conveying speed too high (mechanical and pneumatical conveying)

Please find below some examples how to reduce the quantity of broken product.

Example	Problem	Solution
<p>Problem: Product is fed by a screw conveyor into the digging side of a bucket elevator.</p> <p>Solution: The screw conveyor is replaced by a vibrating conveyor and the elevator by a universal Z elevator</p> <p>Effect: Product breakage reduced from 5% to 0.5%.</p>		
<p>Problem: Product is discharged from a bin directly into rotary air lock. The product flow cannot be controlled.</p> <p>Solution: The bin is equipped with a vibrating feeder to give a constant feed rate to the rotary airlock.</p> <p>Effect: Product breakage reduced from 3% to 0.3%</p>		
<p>Problem: The product is being conveyed at high velocity (Above 20 m/sec) in a dilute phase conveying system.</p> <p>Solution: The conveying system is replaced by a dense phase low velocity (5 – 10 m/sec) system.</p> <p>Effect: The product breakage and fines generation reduced from 4% to 0.5%.</p>		