Moisture Control During Sugar Storage

Sugar is widely used in all parts of the world. However, sugar is extremely hygroscopic, and absorbs moisture very quickly, creating innumerable operational problems during storage and packing.

Effects of Uncontrolled Humidity

- Moisture absorption while conveying affects the final product and spoils the material
- Becomes sticky and inhibits the difficult transfer of sugar
- Corrodes the equipment
- Increase need to clean and in turn increase downtime
- More wastage
- Flow is hindered because of agglomeration

Causes

- Mold growth and spoilage
- Condensation inside silos
- Corrosion of equipment
- Increase maintenance cost

General Recommendations

Brown Sugar or raw sugar is conveyed at below 40% RH level. At the packaging area the recommended temperature and RH level is 20°C and 30%, respectively.
Dew Point of the air is 0°C and the external static pressure to be maintained is 500-1000 pascal depending on the length of the conveyor.

Bry-Air Solutions

Pre-drying the air used in pneumatic conveying drying ensures that sugar is transported dry into the silos. Furthermore, the same dehumidified air used for conveying can be delivered into the silos and hopper, and will not cause the sugar inside to solidify and improve its quality.

Partial Reference List

- Andhra Sugar Ltd.
- Dhampure Speciality Sugar Ltd.
- Indian Sugar General Engg Corporation.
- Jeyrope Sugar Company Ltd.
- Sugarcane Breeding Institute.