

RELIABLE PERFORMANCE RELISHING RESULTS

Sugar production from beetroot requires continuous transfer of media with varied viscosities & high temperatures right from raw juice production to end molasses. Final sugar derived from beetroot has 99.7% sucrose where rest is moisture. Apart from producing sugar, the sugar beet plant produces beet pulp & molasses as by products which can be used as animal feed for livestock.



SUGAR-BEET PRODUCTION

- Properly cleaned & sliced sugar beets having sugar content up to 20% are fed into Raw Juice Processing unit.
- Raw Juice production unit, the hot water stream & sugar beets are transferred into diffuser unit where the water flows opposite to the sugar beets in a process known as extraction. The resulting juice contains 98% of the sugar in beets as well as organic & inorganic contents.
- Juice Cleaning Unit; Non-sugar is bound and removed by adding lime and carbonic acid to raw sugar juice.
- Juice Filtration, the flocculatable insoluble non-sugar & the lime are filtered into thin juice and the filtered residue as carbonated lime is used as soil improver in fields.
- The thin juice is thickened in a multi stage evaporation process. The steam generated from high pressure boilers is fed into turbo generators to produce electricity and the waste steam is used as process heat for evaporation process.
- The thick juice is further thickened in evaporators under vacuum conditions and finely ground sugar is added to trigger crystallization process allowing crystals to be formed as per desired size.
- Sugar crystals are removed from syrup by means of centrifugation process. The separated syrup is subjected to two more cycles of Crystallization and centrifugation process. The final separated syrup is known as molasses containing 6% to 9% of non-crystallized sugars.
- Finally, the sugar is exposed to white light to obtain pure and crystal clear sugar which is then stored in silos and packet to various industries and households.

PROGRESSIVE CAVITY PUMPS APPLICATION IN SUGAR-BEET INDUSTRY

- Transfer of Slice mash to Raw juice production Unit.
- Dosing of Lime & carbonic Acid to Juice Cleaning Unit.
- Transfer of sugar syrup to multi stage evaporation units.
- Molasses Transfer.

— Roto Pump range for Sugar Industry —



Wide Throat WM Series Pump

Capacity: up to 200m³/hr
Pressure: up to 36bar



Industrial RD/RM Series Pump

Capacity: up to 420 m³/hr
Pressure: up to 48 bar



RJ Dosing Pump

Capacity: up to 500 lph
Pressure: up to 24 bar