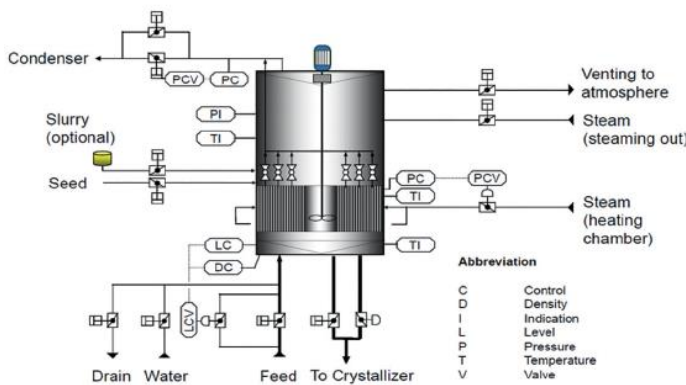


Pan^{plus} Automation System

In most of cane sugar factories, the crystallization process still has no inadequate automation. This causes a lot of inefficiencies in the crystallization process. One of the major drawbacks of the manual or semi automatic pan operation is false grain formation, which has negative cascading effects like additional water/steam requirement, longer strikes, additional vapours to, additional power, etc. water addition to pans can cause 2-20% more exhaust steam requirement. Additionally, more man power is required.

The Pan^{plus} is a complete automation system, which handles the whole strike from evacuation to discharge fully automatic, leaving no space for any operational flaw due to any human error. The system keeps the crystallization process stable throughout the strike to minimize false grain formation. It prevents unrequired water used for washing the false grains which in return prevents all the negative cascade effects at the pan station.



Salient features of the automation system

- World class automation system
- Single or redundant system as per requirement
- Analog signals with HART protocol
- Easily expandable
- Data archiving
- Easy maintenance and diagnostic
- Remote monitoring and troubleshooting
- Easy hook up with third party system
- Communication through PROFIBUS/ PROFINET network

Benefits of Pan^{plus}

- Fully automatic operation
- Better pan station management
- Man power optimization
- Almost no false grain formation
- Saves 2-5 tons water per batch
- Exhaust steam saving of 4-5 % on cane possible
- Shorter pan strikes
- Better pan capacity utilization
- Less sugar recirculation due to better CV of sugar
- Less sugar color due to shorter boiling time
- Supersaturation based automatic seeding
- Mass balance based feed to the continuous pans
- Crystal size & quantity control
- Less vapors to the condensers; Injection water & power saving
- Easy to operate / user friendly system



consultation • project work • engineering design • supervision

