YUTECH BRIX ANALYZER (HIGH-FREQUENCY BRIX ANALYZER) AND AUTO-RETRACTABLE SELF-CLEANING BRIX SENSOR

BASED ON YUTECH'S A15 INTELLIGENT ANALYZERS AND SYSTEMS PLATFORM

BRIX ANALYZER

BRIX SENSOR

BRIX ANALYZER CONTROLLER

Brix Analyzer and Sensor combination targets sensing of Suspended Solid Content (Brix) in Slurries or Syrups like Sugar Massecuite, Sugar Syrup, Sugar Melt and Molasses. Brix Analyzer plays a crucial role in Sugar Process Automation and helps in Stabilizing the overall Sugar Process.

The YUTECH Intelligent Programmable Brix Analyzer is a State-of-the-Art System having Built-in Fuzzy Logic for Automatic Purity Compensation to Accurately Sense, Analyze, Calculate and Derive Massecuite Brix within a Band of varying Purity with Temperature Compensation. This Logic is called Brix Equation and it results in accurate Brix Sensing.

The YUTECH Brix Sensor is Auto-Retractable Self-Cleaning and Self-Washing Brix Sensor. This technique prevents Media Deposits on Sensor Electrode thus always results in Accurate Readings.

Accurate Brix reading ensures better Process Control and helps to maintain constant Massecuite / Melt / Molasses / Syrup Quality and Steam / Vapour Requirement thus results in Higher Sugar Production Efficiency and Minimum Process Losses.

SALIENT FEATURES:
- Brix Sensor Detects Signal Deviation with respect to Solution Brix
- This Signal Deviation is then Processed in Analyzer to obtain Brix Reading
- YUTECH Brix Analyzer is equipped with Intelligent Auto Purity Compensation Algorithm to derive the Brix accurately in Massecuites of varying Purity
- Very Easy Calibration and Online Brix Compensation Recalibration
- In-Built Automatic Temperature Compensation
- In-Built Self Cleaning and Washing of Sensor with pre-adjustable timing cycle
- 4-20 mA Output, Separate Modbus and Ethernet Communications
- On-line Calibration Software "YUTECH-AccessApp" provides Remote Access to Brix Analyzer for Calibration, Compensation and Trouble Shooting.
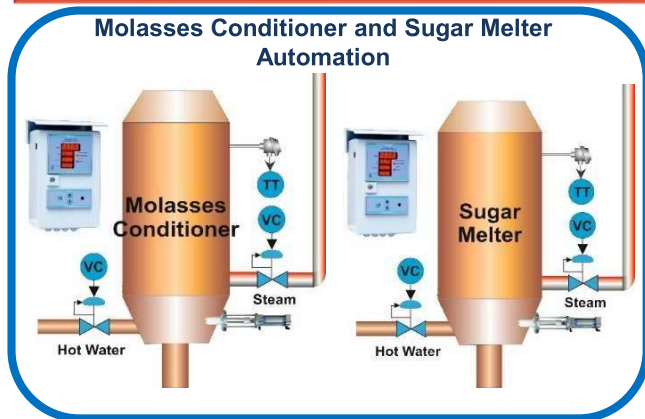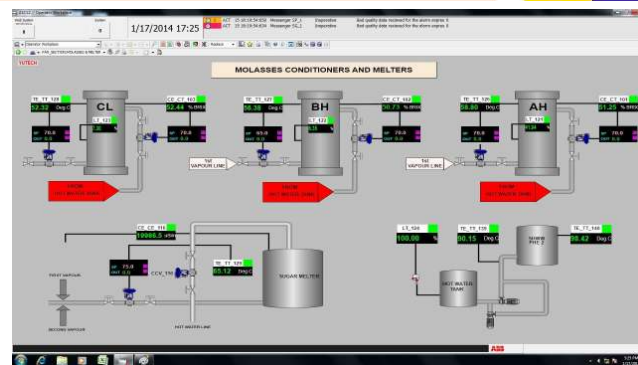

TREND: YUTECH BRIX Vs MICROVAWE BRIX
YUTECH – BLUE LINE
MICROVAWE – WHITE LINE

SCREENSHOT: CVP AUTOMATION

Molasses Conditioner and Sugar Melter Automation

Using Brix Analyzer

SCREENSHOT: MOLASSES CONDITIONER AND SUGAR MELTER AUTOMATION

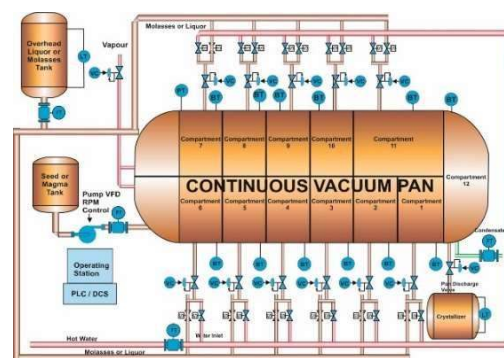**Innovative Features for Ease of Operation and to save on Installation Cost and Materials:**

- **Built-in Brix Equation for Purity Compensation**: to Accurately Sense, Analyze, Calculate and Derive Brix within a Band of varying Slurry, Massecuite or Syrup Media Purity.
- **Built-in Temperature Compensation**: to Accurately Sense, Analyze, Calculate and Derive Brix within a Band of varying Temperature.
- **Built-in PID Controller and Ethernet Communication for Controller Models:**
  - ➢ Highly Accurate Fuzzy Logic PID Controller developed especially for Process Control and Flow Control Applications.
  - ➢ CVP Pan Chamber Control Logic built especially for Continuous Vacuum Pan Operations
  - ➢ Sugar Melter and Molasses Conditioner Control Logic
  - ➢ Remote Set Variable Facility
- **Built-in 3-Point Auto/Manual Station to Select Control Output from:**
  - a. Selector Switch for Local PID Output or DCS/PLC PID Output
  - b. Manual Output for Trouble Shooting

    This feature simplifies installation by eliminating need for installing a Junction Box and Extra wiring.

TECHNICAL SPECIFICATIONS:

- **Power Supply:** 85 - 265 VAC, 50 – 60Hz
- **Analyzer Enclosure:** IP67 Field Mounted Dust and Moisture Proof
- **Input:**
  - IR Sensor Signals
- **Calibration can be done from :**
  - **Keyboard:** Keyboard with 5 Keys is provided in the Analyzer
  - **USB Port:** for Windows / Android based YUTECH-AccessApp
- **Display:** 4 Digit LED Dual Display, LED
- **Signal Output:**
  - 4 - 20 mA Processed Measured or Analyzed Variable Output
  - 4 - 20 mA Controller Output (Optional)
    - This Output can be Configured as below:
      - PID Output
      - Scaled Output
      - PID / Scaled Output can be selected by C2P or C2S in the Product Code.
  - Potential-Free Relay Output for each Sensor Input
  - Ethernet Communication Protocol: Modbus-TCPIP
    - Modbus TCPIP Communication can be selected by adding suffix EM to the Product Code this is available only in the Controller Model.

SCHEMATIC DIAGRAM:
CVP AUTOMATION

FOR MORE DETAILS PLEASE SEE THE PRESENTATION ON OUR WEBSITE www.yutechautomation.com.

CHANNEL PARTNER: