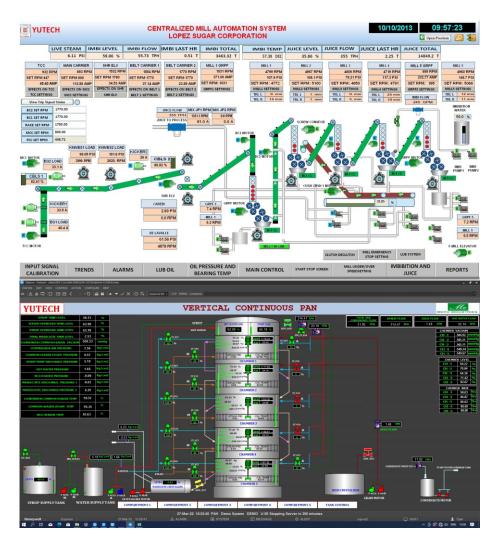




INVEST IN YUTECH AUTOMATION SYSTEMS, AND INCREASE MILLING, SUGAR QUALITY, PRODUCTIVITY, AND PROFITS HIGHER CONSTANT CRUSHING WITH REDUCED POWER, STEAM, AND WATER CONSUMPTION, LOWER WEAR AND TEAR AND MAINTENANCE COST INCREASED SUGAR PRODUCTION WITH BETTER QUALITY



COMPLETE AUTOMATION, INSTRUMENTATION, ANALYZER AND SENSOR SOLUTIONS FOR ENTIRE SUGAR COMPLEX, UNDER ONE ROOF

SUSTAINED GROWTH IN PRODUCTIVITY AND REVENUES IMPROVED PRODUCT QUALITY REDUCED CARBON FOOTPRINT

YUTECH - MAKE MORE MONEY





YUTECH Offers Turnkey Automation and Instrumentation Solutions for Complete Integrated Sugar Complex consisting of Cane Sugar Factory, Sugar Refinery, Co-Generation Power Plant and Distillery.

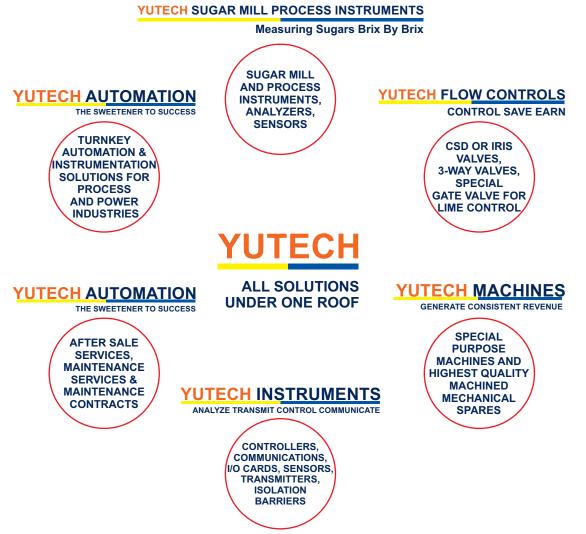
At YUTECH, it is our commitment to Quality Instrumentation and Exceptional Customer Service that has remained the cornerstone of our success. YUTECH has a clear priority, to facilitate the best suited solutions to your specific needs.

YUTECH AUTOMATION - SYSTEMS AND PROJECTS UNDERTAKEN -

- DCS/PLC based Turnkey Sugar Factory, Refinery, Power Plant and Distillery Automation and Instrumentation
- Complete Mill House, Sugar Process, Refinery, Condensor, Centrifugal Automation on PLC / DCS / Controllers
- Customized Automation and Instrumentation of any Process Industry, Distillery, Power Plants, Chemical Plants, Food and Beverages Plants, Starch Plants, Pharmaceuticals, Incinerators, Steel Plants and Machines
- Automation and Instrumentation Service and Maintenance Contracts for these Industries

THE YUTECH ADVANTAGE IS: ALL SOLUTIONS UNDER ONE ROOF:

YUTECH Provides all Specialized Sugar Mill, Sugar Process, Sugar Refinery, Boiler and Distillery Automation and Instrumentation Solutions, Researched, Developed and Implemented in Sugar Factory Environments of Indian, African and Asia Pacific Regions with an Experience of 42+ Years and 500+ Sugar Factories. YUTECH also manufactures Excellent Quality Mechanical Spare for Sugar Factories.



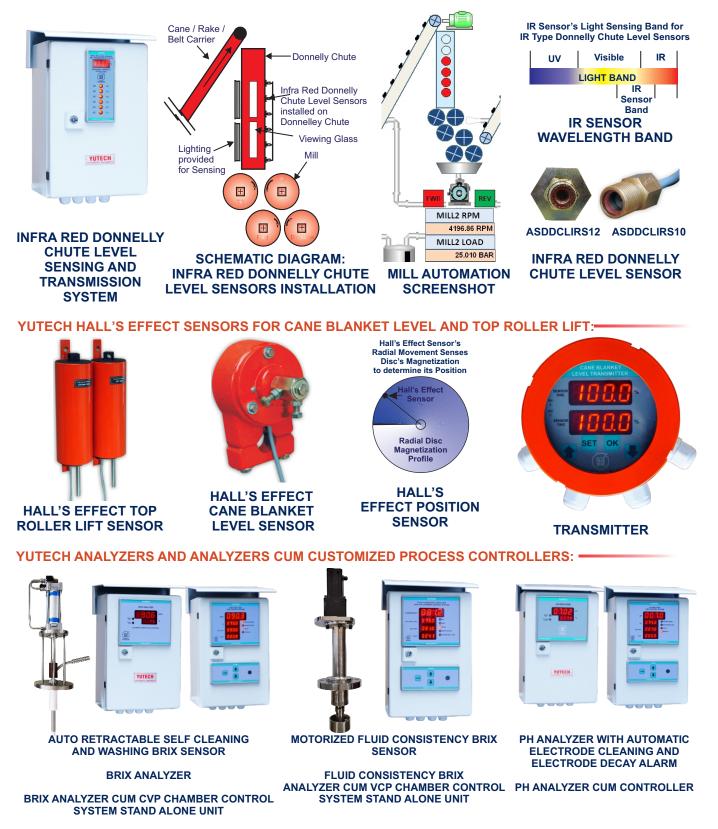


YUTECH SUGAR MILL PROCESS INSTRUMENTS FOR MILL AND PROCESS SECTION



YUTECH INFRA RED DONNELLY CHUTE LEVEL SENSOR AND TRANSMISSION SYSTEM:=

Please refer to our website <u>www.yutech.in</u> and <u>www.yutechautomation.com</u>. You can download detailed presentations of all Instruments, Automation, Systems, and Controls from our website. Please send your esteemed and valuable enquiries to <u>sale@yutech.in</u>. Please download **YUTECH SUGAR MILL PROCESS INSTRUMENTS** Brochure.





YUTECH SUGAR MILL PROCESS INSTRUMENTS FOR BOILER AND TURBINE SECTION



YUTECH INFRA RED SENSOR AND TRANSMISSION SYSTEM FOR BOILER BAGASSE SILOS:

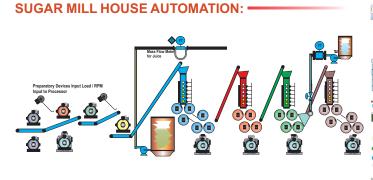
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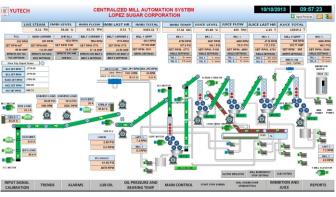




YUTECH SUGAR MILL AUTOMATION







SCHEMATIC DIAGRAM: MILL CONTROL SYSTEM

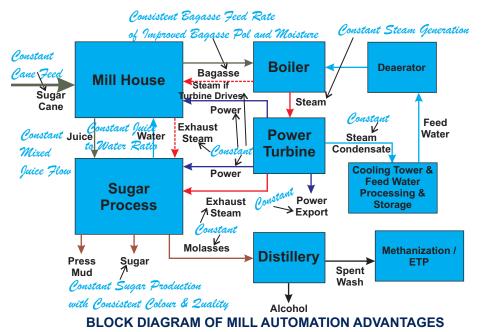
SCREEN SHOT: MILL CONTROL SYSTEM

YUTECH Sugar Mill Automation Ensures the following Advantages and Stabilizes The Whole Sugar Plant:

- Increased Milling with the Same Equipment
- Continuous and Un-interrupted Feeding reduces Downtime and Increase Throughput
- Elimination of Choking at Preparatory Devices, Mills, Chutes or Carriers increases Up Time and Consistency
 Maintained Juice to Imbibition Water Patio increases, Juice Evaporation Efficiency in Evaporators while ensuring
- Maintained Juice to Imbibition Water Ratio increases Juice Evaporation Efficiency in Evaporators while ensuring Effective Water Saving. Further Cutting off Water Flow when Crushing is stopped ensures Dry Bagasse
- Optimum Mill Speeds w.r.t., Loads and Levels ensure good Milling and Stabilized Constant Mill Power Demand
- Constant Juice Flow for Process ensures even loading in the Boiling House and Stabilizes and Reduces the Steam Consumption which means higher Boiling House efficiency and Bagasse Saving
- Constant Bagasse Feeding to Boilers of Consistent Bagasse POL and Moisture Ensures Better Boiler Efficiency

YUTECH Sugar Mill Automation Features:

- Infra Red Type Donnelly Chute Level Sensors (We are Inventors and the Only Manufacturers of IR Sensors for Donnelly Chute Level) ensure Correct and Accurate Level Sensing through Raining Bagasse inside the Chute
- Hall's Effect Type Cane Blanket Level and Top Roller Lift Sensors
- Precision Motor Load / Pressure Sensors to sense Cane Preparatory Device / Mill / Pressure Feeder Load
- User Friendly Customized Mill Automation Software



YUTECH Mill Automation Improves not only Mill Efficiency but also Boiler, Process and Overall Factory Efficiency, Quality and Performance Hence Mill Automation Increases and Sustains Revenues Year on Year



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YUTECH SUGAR PROCESS AND REFINERY AUTOMATION



Sugar Melter and Molasses Conditioner Automation

• Pressure Reducing and De-Superheating Station Automation

Sugar Refinery / Pharma Grade Refinery Process Automation

SUGAR PROCESS, REFINERY AND PHARMA GRADE SUGAR PROCESS AUTOMATION:

Condensor Automation

Vertical Crystallizer Automation
Superheated Wash Water System

Steam and Vapour Balancing System

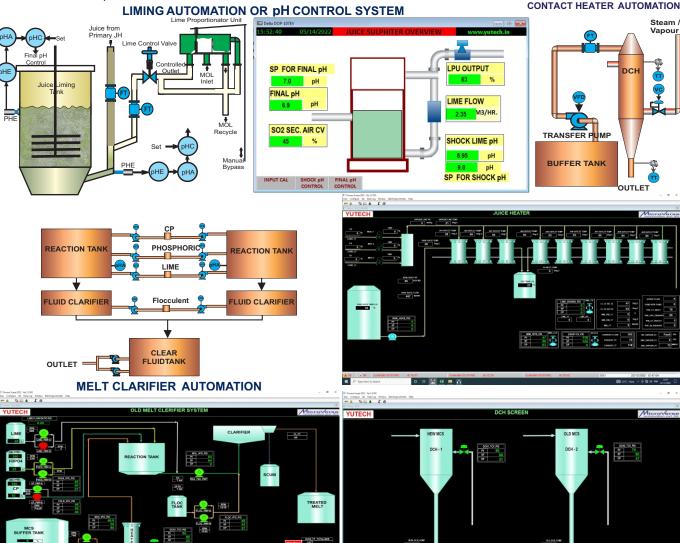
Continuous Centrifugal Machine Automation

- Juice Heater / PHE Control System
- pH and Lime Dozing Automation
- Clarifier Automation
- Direct Contact Juice Heater Automation
- Evaporator Station Automation
- Batch and Continuous Pan Station Automation
- Juice / Syrup / Melt Clarifier Automation
- Vertical Continuous Pan Automation

Operational Advantages of Process Automation:

- Stabilized Shock Lime and Final pH Ensures Better & Consistent Juice Clarity & Stabilized Dorr pH.
- Constant Evaporator Operartion Ensures Smooth Sugar Manufacturing Process
- Maintained Evaporator Level Reduces / Eliminates Entrainment through Vapour
- Constant Evaporation results in Constant Vapour Generation hence better Heat Efficiency
- Pan Automations Ensure Maintained Grain Size thus better and constant Sugar Quality.
- All above advantages ensure Better Sugar Colour thus Higher Sugar Price.
- Increased Throughput in the same operation time and Optimum Capacity Utilization.
- Saves Power, Steam and Water thus Fuel Saving.
- Reduced Cost of Operation effect Substantial Economic Gains.





Sales: sale@yutech.in, Technical: projects@yutech.in W: www.yutech.in; www.yutechautomation.com

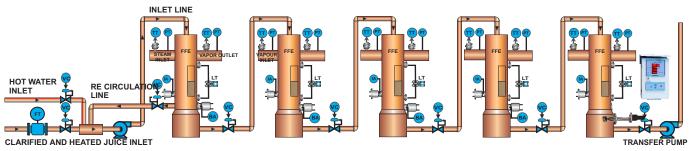


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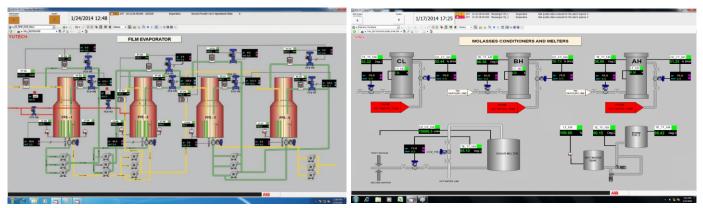
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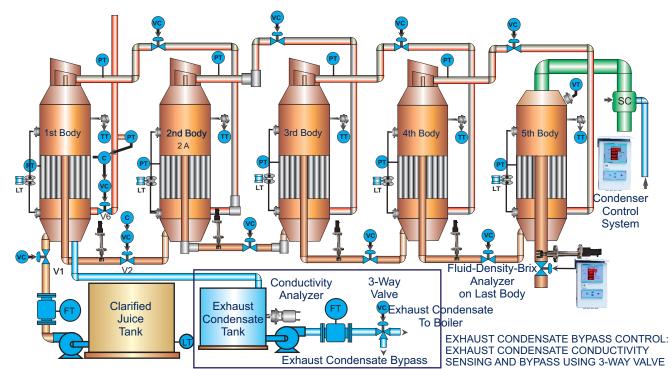


SCHEMATIC DIAGRAM: FALLING FILM EVAPORATOR AUTOMATION



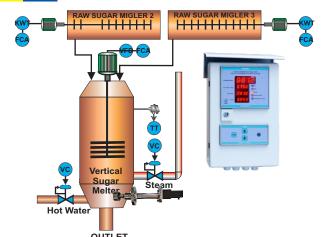
SCREEN SHOT: EVAPORATOR AUTOMATION

SCREEN SHOT: SUGAR MELTER AND MOLASSES CONDITIONER AUTOMATION



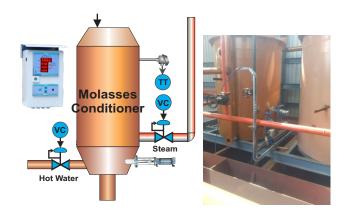
SCHEMATIC DIAGRAM: RISING FILM EVAPORATOR AUTOMATION



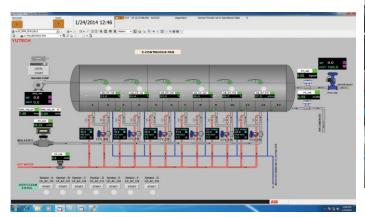


SCHEMATIC: SUGAR MELTER AUTOMATION





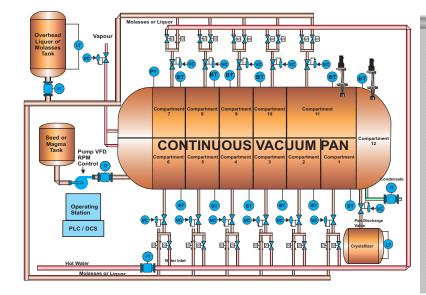
SCHEMATIC DIAGRAM: MOLASSES CONDITIONER AUTOMATION



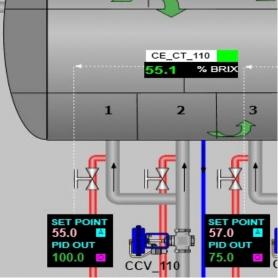
SCREEN SHOT: HORIZONTAL CONTINUOUS VACUUM PAN AUTOMATION USING YUTECH BRIX ANALYZER



PICTURE OF YUTECH SELF CLEANING AUTO RETRACTABLE BRIX SENSOR INSTALLED ON CV PAN



SCHEMATIC DIAGRAMS: CONTINUOUS VACUUM PAN AUTOMATION

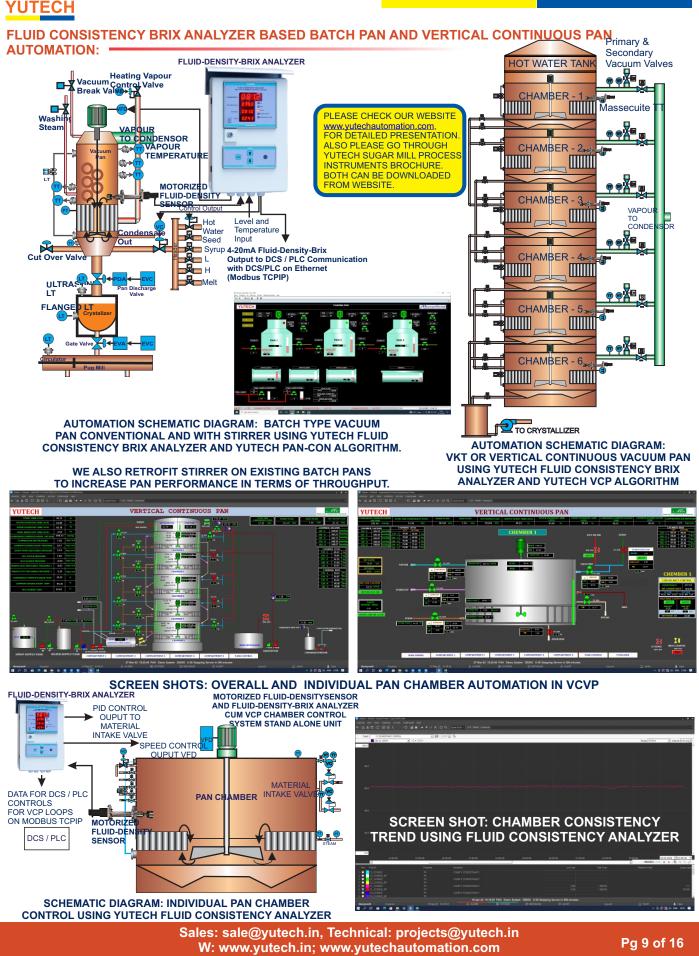


SCREEN SHOT: YUTECH BRIX READING AND CVP COMPARTMENT CONTROL

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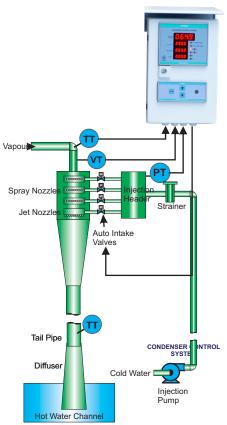


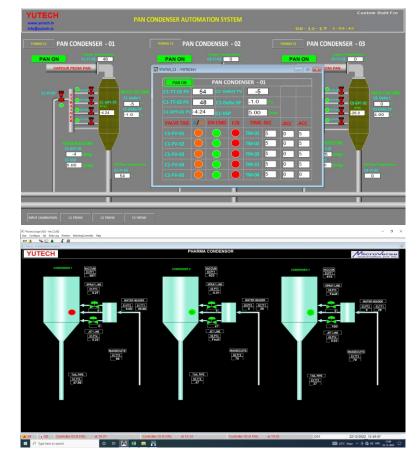




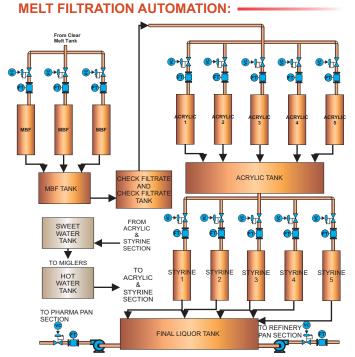
CONDENSER AUTOMATION:





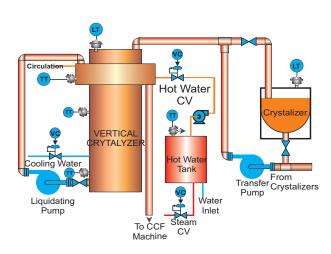


SCHEMATIC DIAGRAM SCADA AND HMI SCREEN SHOT: AUTOMATIC MULTIPLE ENTRY CONDENSER SYSTEM



SCHEMATIC DIAGRAM: AUTOMATION OF MELT FILTERATION FOR PHARMA GRADE AND REFINED SUGAR

VERTICAL CRYSTALLIZER AUTOMATION:



SCHEMATIC DIAGRAM: VERTICAL CRYSTALLIZER AUTOMATION





CONTINUOUS CENTRIFUGAL MACHINE AUTOMATION USING CSD OR IRIS VALVE:-



YUTECH CSD Valve also called Iris Valve based Automatic Feeding of Continuous Centrifugal Machine

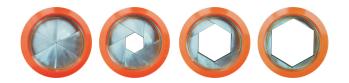


Item Code: YU-CSDV-V02-FL1-6-EPP



Item Code: YU-CSDV-V03-6-EPP

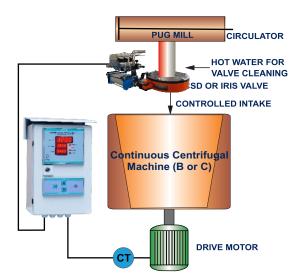




YUTECH CSD Valve opens through the Centre in a Hexagonal Shape like an Aperture thus facilitating perfect Masecuite Entry in the Centre of the Continuous Centrifugal Machine's Basket

Item Code: YU-CSDV-V03-6

YUTECH CSD Concentric Split Diaphragm



SCHEMATIC DIAGRAM OF CONTINUOUS CENTRIFUGAL MACHINE AUTOMATION



CONTINUOUS CENTRIFUGAL MACHINE FEED CONTROLLER





POWER PLANT AUTOMATION:-

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YUTECH has successfully executed many complete Power Plant Automation Projects based on various PLC and DCS Platforms.

Boiler Automation Features that Ensure Higher Efficiency:

Boiler Feed Water and Steam Side Automation:

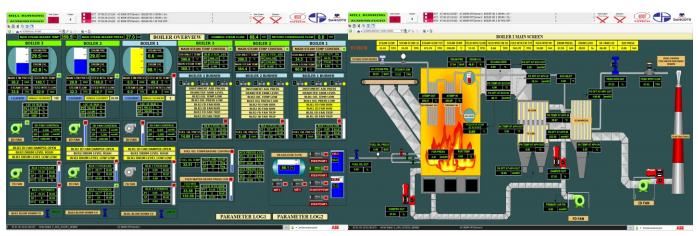
- Consistent FW Temperature due to accurate De-aerator Controls
- Very smooth and finely tuned Three Element Control System ensures
- balance between Steam Flow, Drum Level and Feed Water FlowPressure & Temperature Compensated Three Element Controls
- ensure Consistent and Optimum Steam Generation • Shrink and Swell Compensation in the Drum Level ensures Constant
- Stam Pressure.
- Multiple Boiler Pressure Compensation ensures all Boilers work at same Pressure with minimal Pressure Difference. This further ensures Constant Desired / Rated Steam Flow as Steam entry into the Header from all Boilers will be at same Pressure.

Boiler Combustion Side Automation:

- Combustion Algorithm directs FD Fan Controls to maintain Consistent Fuel to Air Ratio in accordance with the Steam Pressure thus increased Combustion Efficiency, Optimum FD Fan Speeds also reduce Power Consumption
- This Algorithm also directs ID Fan Controls to work in tandem with FD Fan Speeds and Furnace Pressure to ensure proper Combustion Conditions at all times while Optimum ID Fan Speeds also reduce Power Consumption
- Multiple Boiler Pressure Compensation Loop also works in accordance with this Algorithm to maintain all Boilers at the same Pressure
- Proper Combustion is evident from Reduction in Flue Gas Oxygen Level which means Dangerous CO emissions are reduced.

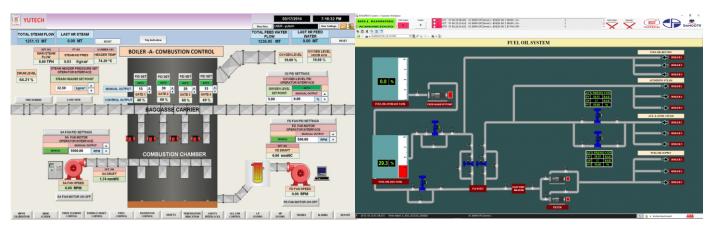
Result of YUTECH Power Plant Automation:

- Improved Overall Boiler Efficiency with Consistent Steam Generation at Constant Pressure and Temperature
- Improved Steam to Fuel Ratio
- Optimum Combustion, Saves Fuel, Reduces Unburnt Carbon Losses and thus Reduces Carbon Footprint
- All Boilers work at the Desired Loads with minimal Steam Pressure Difference thus High Steam Availability
- Consistent Steam ensures Consistent Power Generation



SCREEN SHOT: 3 BOILERS COMMON SCREEN

SCREEN SHOT: BOILER AUTOMATION OVERALL



BAGGASSE COMBUSTION CONTROL

OIL FUEL CONTROLS

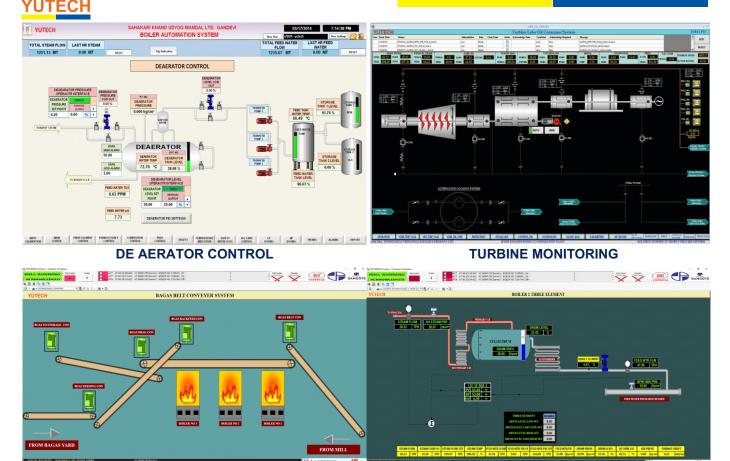
Please refer to our detailed Power Plant Automation Presentation on www.yutech.in; www.yutechautomation.com

YUTECH SUGAR POWER PLANT AUTOMATION

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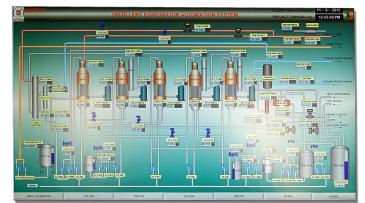
BAGASSE FUEL MANAGEMENT SYSTEM

THREE ELEMENT CONTROLS

DISTILLERY AUTOMATION:

Distillery Automation Ensures Higher Efficiency:

- Distillation Column Automation ensures Correct Heat & Mass Balance thus Constant Distillate Quality Consistently
- Improved Overall Heat Efficiency
- Improved Overall Mass Balance
- Constant Flowrates and Constant Steam and available Heating Media
- Fermentation and Maturation Monitoring with respect to Temperature and Brix improves Process Efficiency and Material Quality
- Distillery Evaporator Automation ensures High Evaporation Efficiency with Trouble-free Process Operations
- Distillation Column Automation ensures Constant Process Parameters Consistently



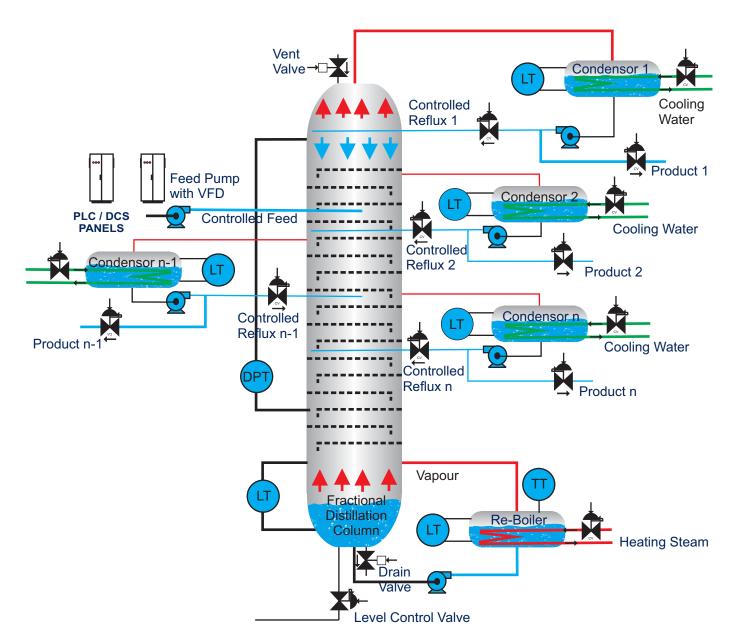


DISTILLERY EVAPORATOR AUTOMATION OVERALL

YUTECH SUGAR DISTILLERY AUTOMATION







Schematic Diagram of Distillation Column Automation

Distillery Automation:

- Heating and Level Control in Re-Boiler and Distillation Column
- Level Control in Distillation Column
- Constant Flowrates and Constant Steam mean Constant Process Media and Constant Heating Media hence even heating at all times
- Reflux Control for all Distillates at different heights as per requirement ensures better and efficient Distillation
- Draining and Venting Controls ensure smooth operation
- Controlled Material Intake ensures improved overall process efficiency
- Flow Sensing at various stages
- Level, Pressure and Temperature Sensing in Fermentation Tanks
- Complete Display as Mimic Diagrams in SCADA Screens
- User Friendly Screens for Optimized Controls





THE YUTECH ADVANTAGE - ALL SOLUTIONS UNDER ONE ROOF:-

AUTOMATION AND INSTRUMENTATION MANUFACTURE AND SYSTEM INTEGRATION:

- In-House Automation Panel Building and System Integration.
- In-House PLC-SCADA / PLC-HMI / DCS Project and System Design, Engineering, Software Development, Trouble Shooting and Testing.
- Dedicated and Highly Experienced Team of Engineers' for Erection, Commissioning and Servicing of Automation Systems and Instrumentation Systems.
- Dedicated Engineers Team to provide Online Support for Remote Trouble Shooting, Calibration and Fine Tuning
- Technical & Engineering back up for Overseas as well as Domestic Clients.
- Undertaking of Product and Software Designing, Engineering, Development and Implementation
- Undertaking of Project Designing, Engineering, Development, Documentation & Drawings and Implementation
- Undertaking of Project Designing, Engineering, Development, Documentation and Drawings for third parties
- Dedicated Engineers' Team for Automation and Instrumentation Engineering, Design, Drawing & Documentation.

IN-HOUSE INSTRUMENTS, VALVES AND MACHINE MANUFACTURING:

- In-House Electronic Equipment Manufacturing and Testing Facility, where we manufacture Industrial Electronic Analyzers, Instruments, Sugar Mill Process Instruments, Sensors, Controllers and other Electronic Devices. In-House Mechanical Facility for Machining, Fitting and Fabrication, where we manufacture CSD or Iris Valves.
- In-house Software Development at all Levels meaning Development in Micro Controller Assembly Language, C, C#.NET, VB.NET, SQL etc for our Electronic Equipment and Machines.
- Dedicated and Highly Experienced Team of Engineers' for Design and Manufacture of Embedded Electronic Systems.
- Dedicated and Highly Experienced Team of Engineers' for Design and Manufacture of Mechanical Equipment and Machines.

IN-HOUSE MACHINE SHOP TO MANUFACTURE MECHANICAL SPARES: (PLEASE SEE OUR SUGAR MILL SPARES BROCHURE)

- **CNC and Manual Lathe Machines**
- CO₂ Welding Machines
- Shaping and Slotting Machines

- Vertical Milling Centre (VMC)
- Gas Torch Profile Cutting Machine
- CNC Laser Profile Cutting Machine

YUTECH DIVISIONS:

YUTECH is a Brand under the Parent Company YU Technologies Pvt. Ltd. Brand YUTECH has Sub-Brands under which we Manufacture Diverse Equipment. These sub-brands are also internal Divisions and are separate Profit Centres made to streamline all business activities and to have higher work efficiency across all divisions.

YUTECH INSTRUMENTS - Manufacturer of Instruments, Controllers, Comm and I/O Cards, Sensors & Transmitters, Scanners, Liquid and Metal Analyzers and Galvanic Isolation Products.

YUTECH SUGAR MILL PROCESS INSTRUMENTS - Manufacturer of Instruments and Analyzers for Sugar Factory, Sugar Refinery, Power Plats, Distilleries, Pharmaceutical Plants, Chemical Plants, Food and Beverages Industries, and other Process Plants.

YUTECH FLOW CONTROLS - Manufacturer of Concentric Split Diaphragm also called Iris Valves.

YUTECH AUTOMATION - Designer, Manufacturer, System Integrator, Supplier and Solution Provider of Turnkey Automation Systems. We also provide Documentation, Consultation, Commissioning and After Sale Support & Maintenance Services, we further undertake AMC for Automation and Instrumentation Systems.

YUTECH MACHINES - Manufacturer of Special Purpose Machines and Fabricated & Machined Mechanical Spares.

YUTECH GLOBAL CORP - Distributor and Stockist for various Global Brands.

YU CIRCUITS - Manufacturer of Industrial Electronic Cards and Spares.



INVEST IN YUTECH EQUIPMENT IMPROVE YOUR PROFITS



INVEST IN YUTECH PRODUCTS, AND ENSURE IMPROVED PROFITS:

- Increase, Stabilize and Sustain Consistent Milling or Crushing and Mixed Juice Flow to Process
- Reduce Maintenance Costs, Human Errors and Downtime
- Improve and Sustain Mill Extraction, while Reducing Bagasse POL and Bagasse Moisture
- Improve and Sustain Overall Plant Efficiency and Machine Life Cycle
- Improve and Sustain Sugar Quality, Grain Size and Colour hence better Sugar Price
- Measure Key Performance Indicators and Improve Key Result Area Parameters of all Sugar Milling and Manufacturing Processes through YUTECH Specialized Monitoring and Control Techniques
- Increase Throughput and Production with Same Mechanical Equipment with Improved Quality
- Highest Quality Mechanical Spares Ensure Increased Equipment Life Cycle and Reduced Downtime

TO SUM IT ALL:

SAVE FUEL, STEAM, WATER AND POWER - THUS SAVE MONEY YET INCREASE CARBON CREDITS IMPROVE AND SUSTAIN PRODUCT QUALITY AND PRODUCTIVITY THUS INCREASE AND SUSTAIN YEAR ON YEAR REVENUE..... SIMPLY PUT - MAKE MORE MONEY

INVEST IN YUTECH EQUIPMENT: IMPROVE YOUR PROFITS





YU TECHNOLOGIES PVT. LTD.,

HO & Works: B8/5, Opposite Power Substation, MIDC-Miraj, 416 410, Distt: Sangli, Maharashtra, India. T: +91 264 4042; +91 916 832 4851, 911 224 9727 / 8 W: www.yutech.in; www.yutechautomation.com E: info@yutech.in; Sales: sale@yutech.in; projects@yutech.in Tech Support: engineering@yutech.in Authorized Channel Partner: