Honeywell

Case Study

# Honeywell MasterLogic PLC and Experion HS at Sri Prabhulingeshwar Sugars Captive Power Plant Increases Profitability

"We are very happy with the Honeywell MasterLogic PLC. The return on investment is extremely attractive, the after-sales service has been outstanding, and to date there has been zero downtime."

## Benefits

An integrated turbine control solution supplied by Honeywell of comprising of MasterLogic PLC and Experion HS SCADA has enabled the Sri Prabhulingeshwar Sugars and Chemicals captive power plant in India to increase profitability.

The Honeywell solution has also changed the way the plant works. Data for various parameters are now more readily available and therefore decisions are made faster, which has increased the efficiency of processes running at the plant.

Furthermore, flexible report generation tools, dynamic mimics, turbine control logics, and 1 millisecond sequence of events time stamping have combined to improve monitoring and safeguarding of plant assets.

## Background

Sri Prabhulingshwar Sugars and Chemicals Ltd. is located at Jhamakhandi Taluk, Bagalkot District, Karnataka, India. The company is active in diversified markets such as sugar, power and distillation, and exports around 60% of its production.

The plant has a capacity of 8,500 TCD (tons crushing per day). Recently a new 27 MW turbine was added as a CPP (Captive Power Plant) to generate power from bagasse. Bagasse is the fibrous matter that remains after sugar cane is crushed in a sugar manufacturing factory and it is used as a biofuel.

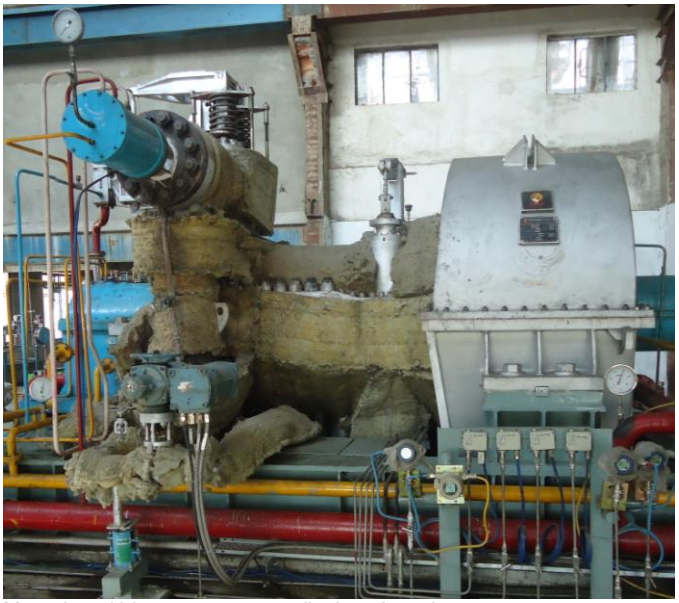
The power generated from bagasse is used for internal purposes in the sugar factory and any additional power is supplied to the state's electricity board. This utilization of biofuel is very beneficial and is encouraged through subsidies, and is an additional source of revenue for the company.

The Control Room at Sri Prabhulingshwar Sugars and Chemicals Ltd

## Challenge

Generating power from Bagasse comes with its share of challenges as it is not a fuel that can be perfectly metered. Modernization with accurate controls of the parameters like steam speed  pressure and temperature is a mandatory requirement for such processes.When the company decided to go in for a new control system Honeywell had three other major competitors to contend with.

"We chose to work with Honeywell because they are a multinational company with a good reputation," explained Mr. Hipparagi, General Manager, Electrical & Instrumentation at Sri Prabhulingshwar Sugars and Chemicals. "In addition, our consultant Avant Garde recommended Honeywell, and we always receive outstanding service from Shiv Consultancy, a Honeywell channel partner."



More than 100 parameters are displayed, such as pressure, vacuum, temperature, exhaust etc.

## Solution

The Honeywell solution selected for the turbine control system was the MasterLogic 200R Programmable Logic Controller integrated into an Experion HS SCADA system.

MasterLogic PLC is a pocket-sized industrial logic controller powered by a high-speed processor. It can operate in a standalone manner, in a peer-to-peer environment, or in a SCADA topology with Experion HS. It features a wide range of components (the CPU, power supplies, discrete and analog, I/O modules, network modules, and racks) which are available in different modules to suit many different applications.

MasterLogic PLC takes information from various sensors and uses it to control different machines. A reliable processor makes it intrinsically powerful, and all program instructions are executed at a high speed of 42 ns/step. A dedicated Ethernet-based I/O bus controller supplements the main processor in I/O refresh to achieve high speed scanning, and its redundancy feature ensure high availability, especially for critical applications.

Available with standard functions, MasterLogic PLC also supports creation of new or user-defined functions. It works in a loop-based, user-defined program where it waits for input and output at predefined intervals, and can perform self-diagnostics for system errors and troubleshooting. Built on open network standards, this programmable logic controller is integrated with the Experion platform.

The solution takes care of the complete monitoring and control of various process parameters as well as guaranteeing turbine uptime.

“We are very happy with the Honeywell MasterLogic PLC. The return on investment is extremely attractive, the after-sales service has been outstanding, and to date there has been zero downtime,” concluded Mr. Hipparagi.

The solution enables faster discrete and sequencing control, while saving space and operations costs with its small size and compact modularity.

**For More Information**
Learn more about Honeywell’s products and services, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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