

APPLYING E3 SOFTWARE TO CONTROL PROCESSES OF STORING AND MILLING WHEAT GRAINS PERFORMED IN THE BUNGE C MILL

This case presents the Elipse E3 application to improve the process in the Bunge C Mill

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Needs

Since 1905, Bunge is outstanding in the agriculture and food business in Brazil. Today, the company is one of the greatest exporters, also working on the sugar, bio-energy, and fertilizer business. Presence in 16 states of the country, Bunge has, today, more than 17 thousand collaborators and about 150 units among industries, distribution centers, silos and harbor installations. Located in the city of Santos (SP), its harbor structure is responsible for storing and milling wheat grains.

Aiming to improve processes performed in the C mill, Bunge opted for adopting E3, a supervisory and control solution developed by Elipse Software. For this, it counted on Fascitec Instrumentação Eletrônica Ltda., the company which implemented the supervisory.

Solution

Using E3 screens, the operators can monitor all phases of the process of extracting and milling wheat grains, performed on all seven stories of the mill. Phases that go from extracting and collecting grains to milling, bran separation, and final weighing of wheat grain and bran, which is later, sold as animal food.

The software also allows operators to monitor the amount of dust released and aspired during the milling. This is a fundamental control, not only for checking the amount of dust available in the mill stories, but also for Federal Revenue which periodically audits the mill.

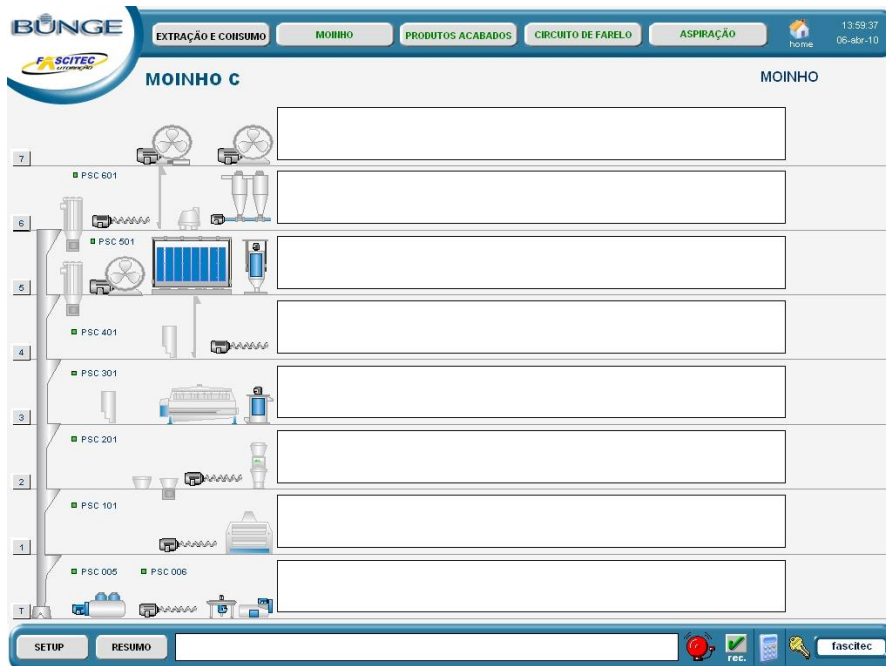


Figure 1. Summary of mill areas

Besides monitoring processes performed on the mill, the software also controls valves, ventilators, cylinder banks, conveyor belts, and elevators responsible for milling and transporting grains. This is done by just clicking the icon representing the equipment to open a window with the command options.



Figure 2. Command screen of one of the ventilators

Added to this, E3 presents a screen which displays the current condition of every equipment, allowing the operator to check if the second ventilator of the seventh story (VEC-702), for example, is turned on, off, or has a failure.



Figure 3. General view of the equipments

The software by Elipse also allows performing general start or stop commands of the mill, providing a way to select the operation type, manual or automatic.



Figure 4. General start of the mill

Another E3 feature is the alarm summary. Using a screen, the operators have access to date, time, name of the operator who acknowledged the failure, area, and the type of occurrence observed on the equipment.

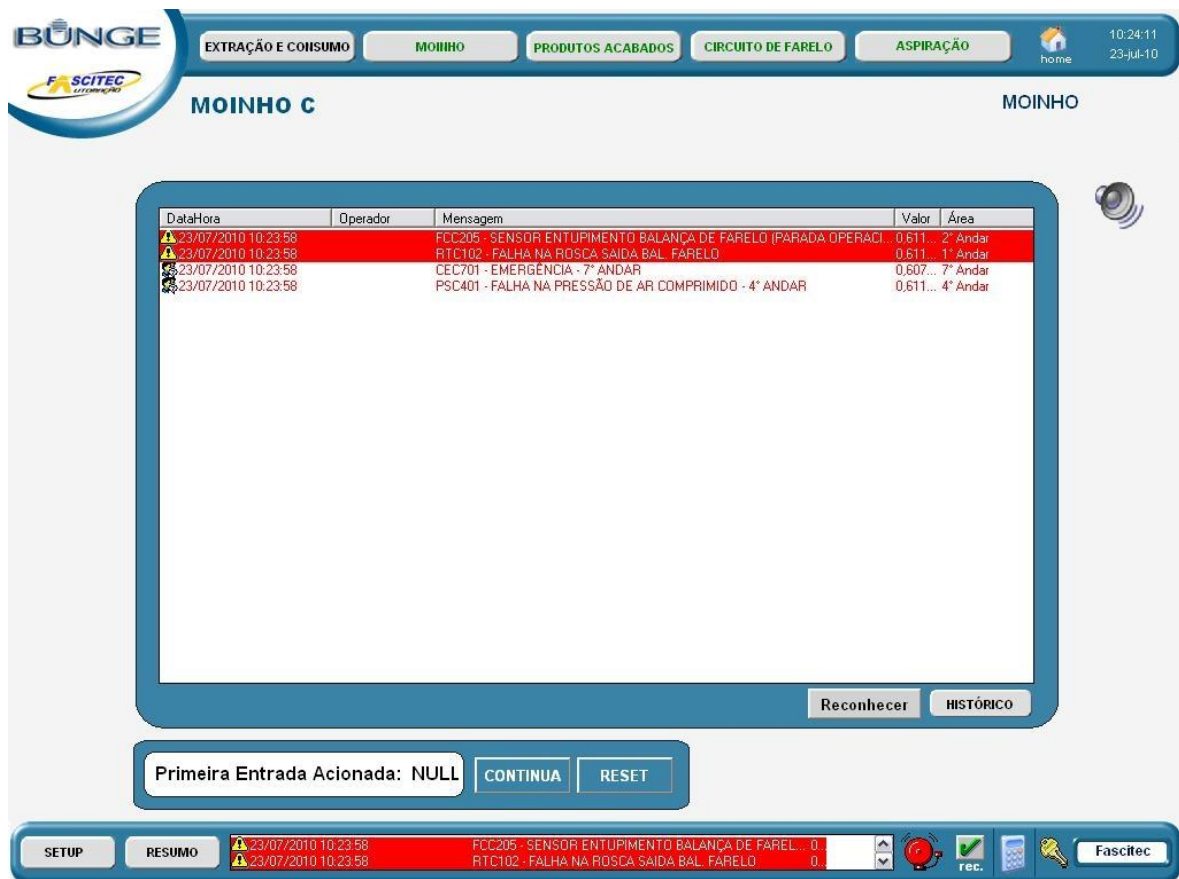


Figure 5. Alarm summary

Finally, the software provides an extraction report displaying the exact amount, in Kg, of products processed by the mill and generated at the end of the milling. The working time and energy consumed by each equipment are also revealed using a chart, being also possible to select a period for monitoring.

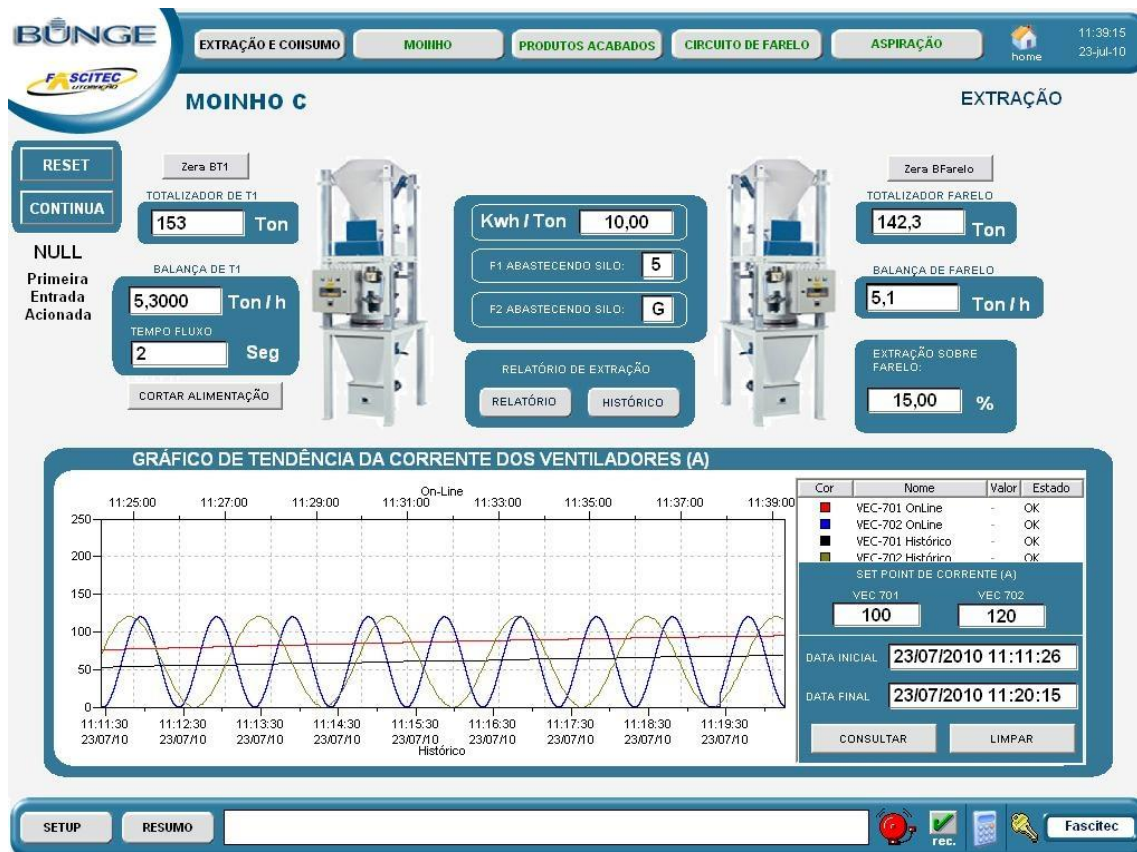


Figure 6. Trend chart of a ventilator current

Benefits

- Starting and stopping the mill automatically.
- Controlling and viewing equipments.
- Monitoring process variables.
- Viewing alarms.
- Collecting data easily through reports.



TECHNICAL INFORMATION

Client: Bunge

System Integrator: Fascitec Instrumentação Eletrônica Ltda.

Elipse Package used: Elipse E3

Number of copies: 1

Platform: Windows XP

Number of I/O points: 1556

I/O driver: GEETH