



Bernard MORIN
Managing Director,
Lesaffre-Frères sugar plant,
Nangis

“The project was successful despite a tight schedule and sometimes difficult weather. Professionalism, sugar process expertise or shared experience, Fives was a partner in this strategic project. Our installation has started up in due time and our objectives have been achieved!”

THE PROJECT

- 1 falling film evaporator
- 4 centrifugals
- 1 dryer

Lesaffre-Frères sugar plant Nangis (77) - France

Located at Nangis South of Paris, the Lesaffre-Frères sugar plant was built in 1873 and processes on average 7,500 - 8,000 tons of beet per day, making it a “small” factory. Nevertheless, it has evolved at the mercy of large sugar movements during the last 50 years and in particular it was rebuilt in 1974 on the partial basis of Fives’ equipment for which the customer is satisfied.

- Replacing the existing batch centrifugals If both quality of the machine and of the separation, and low energy consumption are pretty standard on the market, the double discharger system of the Cail & Fletcher ZUKA® made the difference.

ONE CHALLENGE: IMPROVE THE EXTRACTION RECOVERY

In the development of the factory, the main objective of Bernard Morin, its Managing Director, was to limit energy costs related to the inter-crop recovery of stored syrup, and treat all syrup in crop. Indeed, Nangis factory then made 900 tons of sugar per day, storing syrup, while the daily capacity is 1,200 tons of sugar.

Therefore, the issues were clear: improve extraction yields of the first jet by increasing the crystallization capacity, and match the batch centrifugals and sugar dryer to this new capacity. To achieve these objectives, Bernard Morin needed to:

- Add a falling film evaporator to match the heat balance to the new crystallization

For this equipment, the main selection criterion was the quality of the juice distributor, crucial to avoid tube fouling.

“After doing a quick inventory of market players and interviewing some of our colleagues, including customers of Fives, the selection of the Cail & Fletcher falling film evaporator has become clear to us!” Mr. Morin explains.



Lesaffre-Frères sugar plant at Nangis.
Production: 900 tpd

"Beyond the gain in time, cycle optimization, and the increase in productivity, the double discharger limits the mechanical constraints, and this capability, unique to Fives, finally convinced us!" continues Bernard Morin.

— Replacing the dryer

"It's the equipment which posed the fewest questions!" recalls Mr. Morin. "The versatility of the multitube technology allows for sugar drying and cooling in the same machine. Therefore, no intermediate handling is needed, and the sugar crystals are preserved, which is crucial for us."

In July 2012, convinced of the high added value of Fives' equipment, Lesaffre-Frères signed a contract with Fives for the supply and installation of a Cail & Fletcher falling film evaporator, 4 Cail & Fletcher falling film evaporator, 4 Cail & Fletcher batch centrifugals and a Cail & Fletcher multitube dryer/cooler.



The Cail & Fletcher ZUKA® enables a 30% increase in capacity thanks to the double discharger



The Cail & Fletcher falling film evaporator guarantees optimized distribution of the juice

A SATISFACTORY PROJECT EXECUTION

After one season with Fives' new equipment, Mr. Morin's assessment is clearly satisfactory: *"Overall, the project went well despite a tight schedule and sometimes difficult weather conditions. Our facility has started in due time and our objectives have been achieved."*

If the results are consistent with the promise for the falling film evaporator and the multitube dryer/cooler, Mr. Morin's teams particularly enjoyed the easy takeover of the Cail & Fletcher ZUKA®. *"For operators, changing machines is always tricky, and it often takes time before they take ownership of the new equipment. With the Cail & Fletcher ZUKA®, the settings are simple, the interface*

user-friendly, and therefore our operators... relaxed!"

In addition to the high added value of the equipment, Bernard Morin highlights the quality of the relationship with Fives' teams. *"Professionalism, sugar process expertise or shared experience with their engineers, Fives was a partner in this strategic project. We especially enjoyed their ability to listen and take into account our limitations."*

Today, the Nangis installation works well and the goal is to reach a daily average of 1,300 tons of sugar, or more, as the installation is so successful.



The Cail & Fletcher multitube dryer/cooler preserves crystal quality

ABOUT ENERGY | SUGAR

Within Fives Group, Energy | Sugar dedicated teams put their two hundred-year expertise to serve customers and provide them with energy efficient, automated and flexible equipment. Together with a wide range of services, the equipment and complete lines are designed to optimize the sugar process and maximize returns.

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