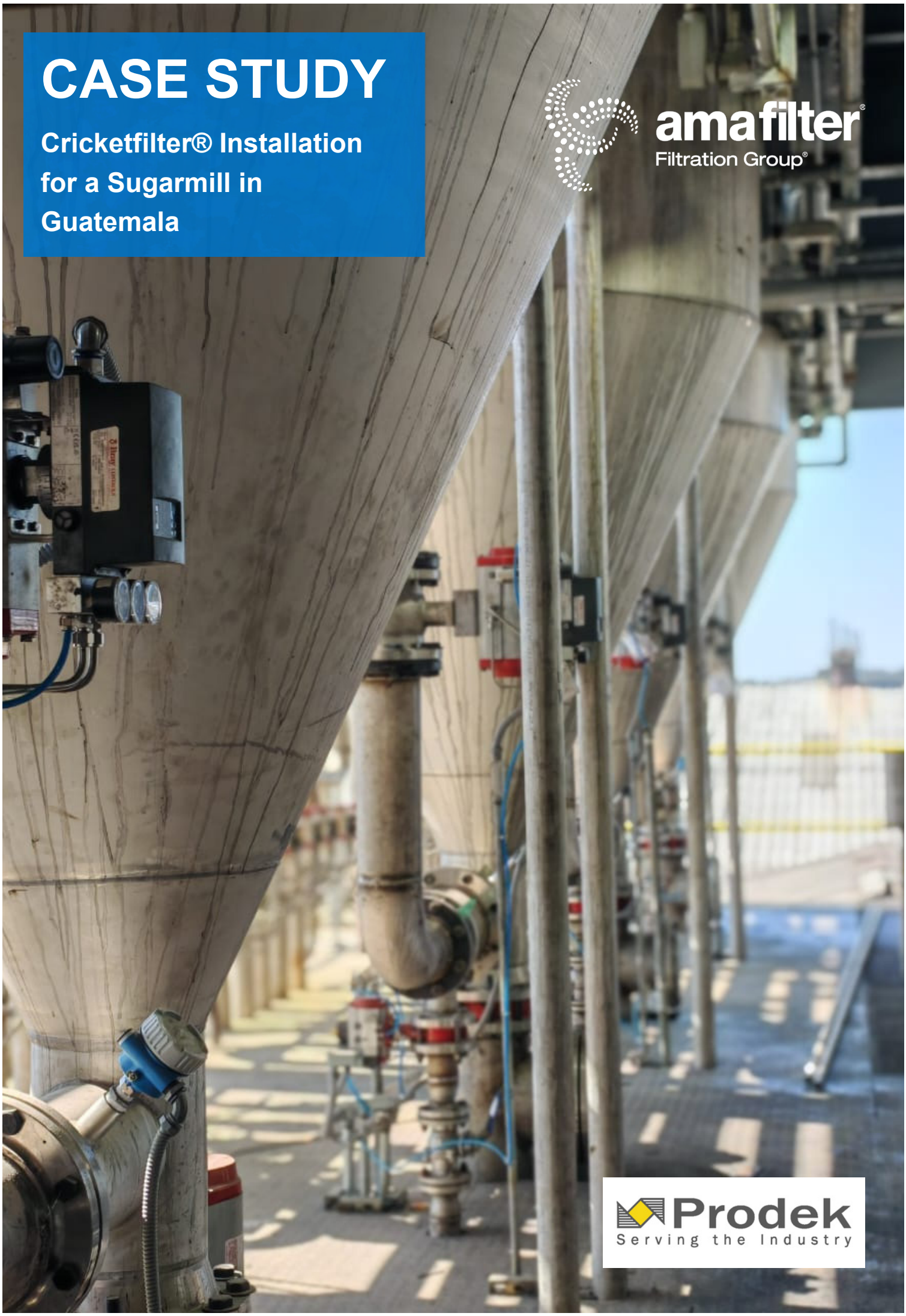
CASE STUDY

Cricketfilter® Installation for a Sugarmill in Guatemala

amafilter®
Filtration Group®



Prodek
Serving the Industry

CASE STUDY

Application: Sugar – Refined sugar production
Product: Cricketfilter® Automated System
Location: Guatemala, Latin America
Installation: 2024

Delivering High-Purity Sugar Liquor with Fully Automated Filtration

BACKGROUND

A leading sugar producer in Guatemala, operating an 18,000 tonnes of cane per day (TCD) sugar mill, was preparing to expand into refined sugar production. To achieve the required product quality, the customer needed a filtration solution capable of delivering consistently clear sugar liquor while operating reliably under demanding refinery conditions.

THE CHALLENGE

The solution also needed to support a fully automated operation, reducing operator intervention while ensuring process consistency, high availability and continuous production.

The key requirements were:

- Filtrate quality of <5 ppm insoluble solids
- Consistent filtration of 65°Bx sugar liquor
- Reliable operation at approximately 70°C
- High system availability through built-in redundancy
- Continuous production with minimal downtime
- Fully automated operation to maximise efficiency and reduce manual intervention

CONCLUSION

The Cricketfilter® automated system installation successfully met the refinery's performance objectives, enabling reliable production of high-quality refined sugar.

The system delivered consistent filtrate quality, high availability, and reduced operator intervention—proving ideal for continuous sugar refining operations in demanding process conditions.

THE SOLUTION

Working in partnership with Prodek, the Amafilter® team supplied a fully automated Cricketfilter® system specifically engineered for the refinery's process conditions.

This filtration system was selected for its exceptional filtration performance, compact design and low-maintenance operation. Its fully automated filtration cycle ensures consistent performance while significantly reducing operator involvement, making it ideal for continuous sugar refining operations.
The filter cloths were specifically designed and engineered for this application, delivering the best possible filtration results.

System Design

- Flow rate: 20 m³/h sugar liquor
- Production capacity: 290 tonnes of refined sugar per day
- Sugar liquor concentration: 65°Bx
- Operating temperature: ~70°C
- Target filtrate quality: <5 ppm insoluble solids

Filtration Configuration

- 1 Primary Cricketfilter® + 1 standby unit
- 1 Secondary Cricketfilter® + 1 standby unit
- Total installation: 4 Cricketfilter® automated systems

THE RESULTS

The Cricketfilter® installation successfully met the refinery's performance objectives, enabling reliable production of high-quality refined sugar.

The customer achieved:

- Consistent filtrate quality of less than 5 ppm insoluble solids.
- Reliable, continuous operation through built-in system redundancy.
- Stable refining performance at high Brix and elevated process temperatures.
- Reduced maintenance and lower operator intervention through full automation.
- Increased operational flexibility, allowing maintenance without interrupting production.