ABB have successfully provided a turnkey solution for Sinterama, a European leader in the production of colored polyester threads and yarns. In order for Sinterama’s relocation of equipment from Italy to Mexico to connect to the local grid, ABB installed a 1250 kVA PCS100 SFC. This enabled Sinterama’s new production facility in Mexico, whose equipment previously operated on a 50 Hz power supply, to connect to Mexico’s 60 Hz grid.

At present, Sinterama produces a vast range of products able to satisfy any requirement for fabrics for automotive, furnishing, clothing and technical end uses. In this new facility, polyester textiles are produced for interiors of cars. This can range from; seat covers, panel coverings, head rests, roof liners, dashboard trims, door pillars and sun visors. Polyester has established itself for automotive use and is continuing to increase in market share over other alternatives. This is because of its better pilling, abrasion and light fastness.

Sinterama needed a reliable power source without having to modify the electrical design of their equipment (due to Sinterama’s relocation from Italy to Mexico where the grid was a 50 Hz supply). ABB were able to convert the supply voltage to the different voltage in order to match the requirement of the load.

As a result of the relocation, the main advantage ABB’s PCS100 SFC was able to provide was no downtime of their 50 Hz equipment adapting to the 60 Hz grid. Managing Director of Sinterama De Mexico, Huseyin Nail Kavrak, highlighted the reason ABB’s PCS100 SFC was selected over alternative solutions; “ABB offered a better designed product and a favorable delivery time frame. This enabled Sinterama to achieve its goal of no downtime of equipment adapting to a 60 Hz grid".
Ongoing advantages were the reduction of operating and maintenance costs, high reliability by providing maximum power availability. Keeping Sinterama’s equipment running through utility voltage sags and frequency variation, allowing for lowest total cost of ownership, was another key achievement ABB’s PCS100 SFC could offer. The same solution had been adopted in Sinterama’s facility in Brazil. This played a significant role to apply the same procedure in the new facility, due to results already observed.

The new facility is aiming to serve Mexican and US markets with 3500 tons of yarn per annum for car interiors. These two countries alone produce 18.53 percent of the world’s cars.

ABB’s PCS100 SFC technology
The PCS100 SFC allows connection of 60 Hz powered equipment to a 50 Hz supply network and 50 Hz powered equipment to a 60 Hz supply network.

The system functions by converting the input AC power through a sine-wave rectifier to a DC link and then through an AC sine-wave inverter to produce a clean, full sine-wave output at the new frequency and voltage. ABB’s PCS100 SFC has been applied in many applications, from plant relocation and industrial application through to onboard vessels and shore-to-ship solutions. With power ratings starting from 125 kVA to multi MVA, allows for endless options to suit both small and large operations. Of the many features, key highlights are:

- N+1 modular redundancy for mission critical applications
- Lowest total cost of ownership
- Minimal spares required
- Easy paralleling to other voltage sources using droop
- Small footprint in design

To find out more about ABB’s power protection solutions: 
https://new.abb.com/power-converters-inverters/grid-interconnections/industrial/pcs100-sfc
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