

PARTNERSHIPS

SORG Group supplies AMMAT GLASS with full turnkey solution

After AMMAT GLASS sought to improve its hot-end processes to lower energy and maintenance costs, expand capacity and enhance its glass conditioning quality, the Dubai-based container glass manufacturer chose SORG Group to deliver a single source for all its melting and conditioning requirements.

Comprising Nikolaus SORG, EME and SKS, the Group harnessed the 'Power of 3' to deliver a seamless hot end process through an unrivalled combination of products and services.

NIKOLAUS SORG

Here it was Nikolaus SORG that was responsible for designing and engineering a new furnace rebuild for Ammat Glass Industries, which produces glass bottles and jars for the food and beverage industry.

The newly-built furnace had to have a 140 m² melting surface and 450 tpd melting capacity for flint, green and amber glasses. It incorporated Deep Refiner[®] technology, which increased the residence time of the glass in the furnace to improve the glass quality.

ARD regenerators were used to achieve the required regenerator height without high costs for civil work while converting the former double pass regenerators to modern, highly-efficient single pass regenerators.

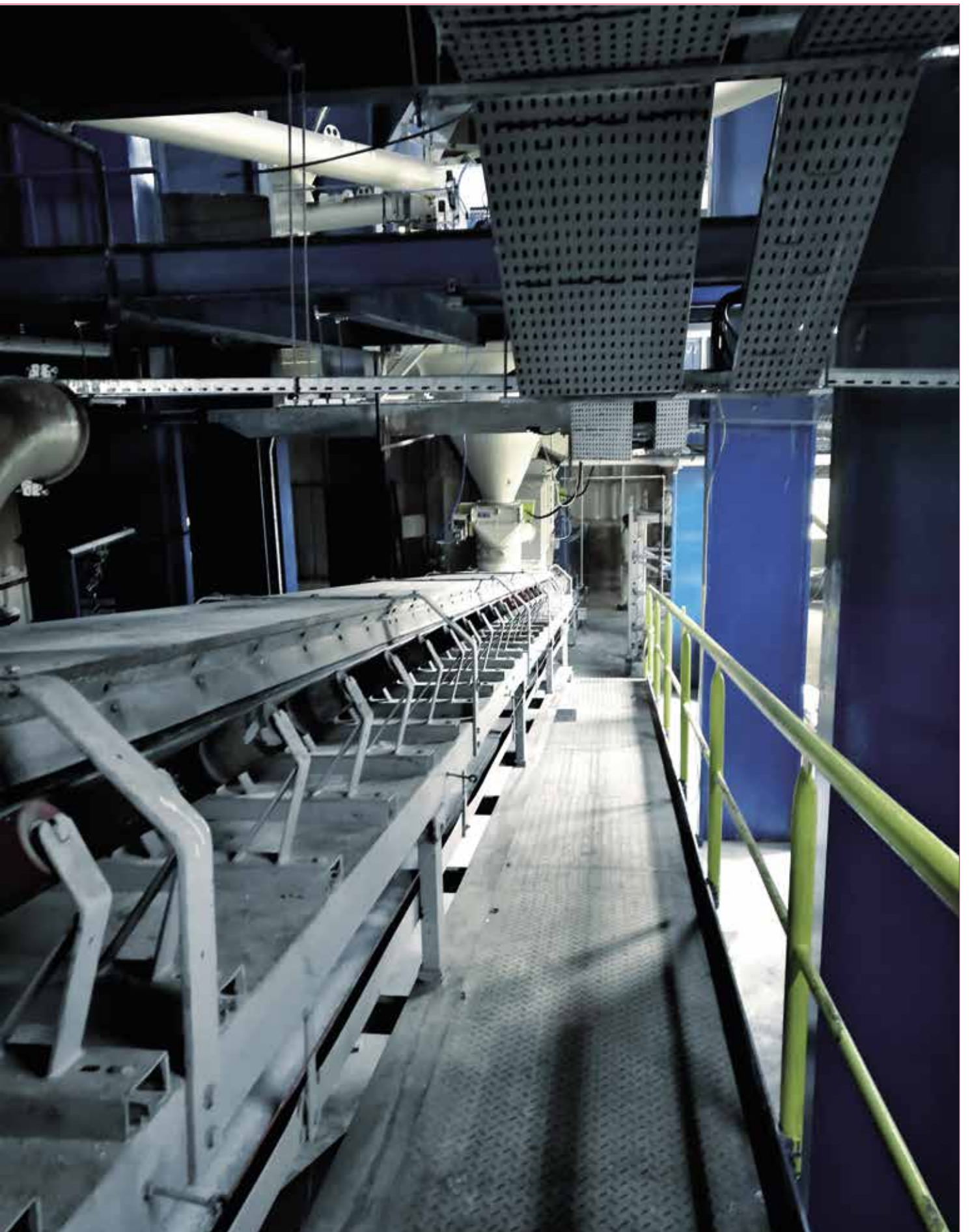
Two IRD dog-houses were also installed to combat possible problems caused by batch carry-over into the regenerators. By combining the dog-houses with the EME-NEND[®] R2 chargers the system is now completely closed, avoiding both energy losses and dust around the furnace.

Nikolaus SORG installed three SORG 340S+[®] forehearth - supplying three IS 12 section TG machines to increase production capacity, with the ability to add a fourth forehearth in the future. Boosting was also used through-

out to assist with melting, thermal barrier boosting and throat boosting.

EME

While Nikolaus SORG led the furnace rebuild, EME improved both the efficiencies and capacity of the batch house system. After auditing the batch plant, the company devised a facility upgrade concept. Here the main goal was to increase plant capacity while improving dosing and weighing accuracies. EME replaced pieces of equipment to enhance accuracy and it installed a new high duty pan mixer. Three new EME-NEND[®] R2 chargers with wetting screws were also supplied. These are equipped with vibratory chutes and specially-designed for high cullet ratios to guarantee low wear. The company also supplied a new cullet return system,



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including a single forklift-chain scraper conveyor with a capacity of 450 tpd. The electric control system was upgraded to a more modern system completely controlled by the PLC.

SKS

SKS supervised erection of the steelwork for furnace rebuilding and provided support with the refractory installation, with over 100 workers present on-site at any given moment. SKS guided both the heating and the commissioning of the furnace. "The aim of SORG Group has always been to offer glass manufacturers with more. By working together with a shared belief in quality, performance and support, Nikolaus SORG, EME and SKS were able to jointly demonstrate to Ammat Glass its Power of 3 in action," said Project Department Head, Hartmut Jaques. "The SORG Group transformed the hot-end process with minimal disruption. It will continue to provide the company with the support it needs to continuously monitor, analyse and improve efficiency throughout the furnace lifecycle."



IN SUM

Nikolaus SORG designed and engineered a furnace that now achieves high energy efficiency coupled with lowered CO₂ emissions. EME's expertise in batch house systems enabled a batch plant capacity increase of 30 percent and SKS successfully supervised the erection and installation of the furnace and batch house

system - including the heating up process to glass flow. Here, by harnessing its Power of 3, SORG Group was able to deliver a single hot-end processes solution - from batch and cullet handling to melting technologies and furnace design to furnace construction and complete lifecycle services. ■



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