



Christian Gärtner, Grenzebach BSH GmbH

## Quick and smooth capacity upgrade

Grenzebach has raised the gypsum wallboard output of the TECHNOGIPS Pro plant in Bulgaria by 50%...

TECHNOGIPS Pro, a member of Balkanstroy Group of Companies (BS Group), has consistently extended its business in the field of gypsum products for the construction sector. In order to meet rising market demand and secure capacity for its ambitious expansion plan, the Bulgaria-based manufacturer decided to upgrade the capacity of its Grenzebach plant by 50%. The Grenzebach BSH technology at TECHNOGIPS Pro covers the entire product process, from the raw gypsum to the finished plasterboard. The Bulgarian producer sells its gypsum materials and building elements to a number of European countries. For the past year it has been able to rely on increased production output, as detailed in this article.

### Intense cooperation between the teams

The decision to upgrade was finalised in mid-2017 and, at the end of the same year Grenzebach had already completed the pre-assembly work on site. It was possible to reduce the shutdown period to a minimum. Since the second quarter of 2018, production has been running at 150% of its original capacity.

"Completing a complex plant upgrade within an ambitious time frame in a reliable and efficient manner is always a challenge. Thanks to the excellent cooperation between the TECHNOGIPS Pro and Grenzebach teams, everything went smoothly," said Christian Gärtner, Sales Manager at Grenzebach.

### Modular dryer design

The upgrade included the extension of the handling and conveying systems, the gas-fired cross-flow dryer and its heat exchanger. The modular design of the cross-flow jet dryer made this very easy.

### Highly energy-efficient heat exchanger

The heat exchanger is designed for efficient use of the energy retained in the exhaust from the drying process. The recuperated energy is used to heat the fresh air taken in and is thus returned to the drying process. Christian

Gärtner states that, "When planning new plants and also when doing upgrades, conserving natural resources to the greatest extent possible is a major concern of ours. This is why the heat exchanger, which makes a significant contribution to energy efficiency, was adapted accordingly."

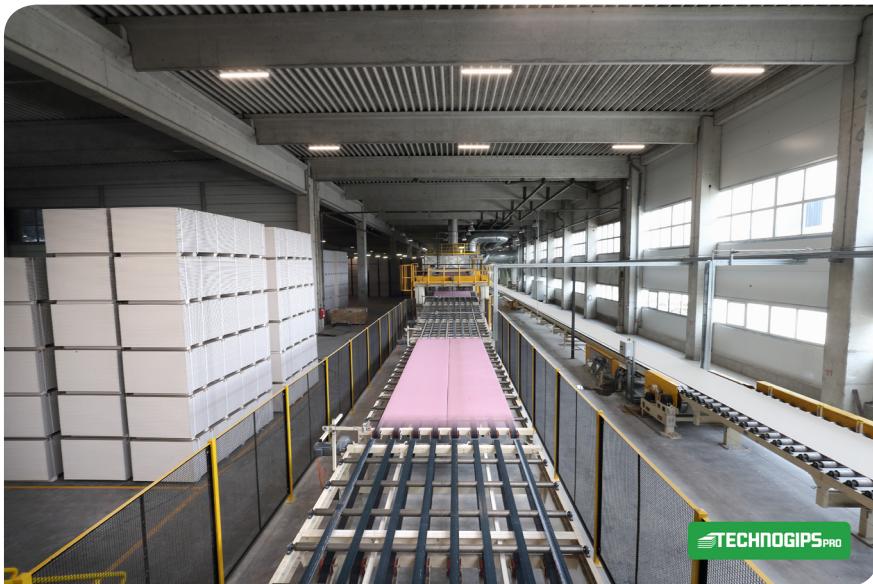
Grenzebach's specialists also installed a new dunnage machine at TECHNOGIPS Pro. This machine cuts plasterboards into strips, which TECHNOGIPS Pro uses instead of wooden pallets when packaging the board stacks. The stacks are wrapped in film and are thus ready for shipment.

### Planned with foresight a decade ago

TECHNOGIPS Pro and its technology supplier Grenzebach had designed the original plant with foresight for a possible extension already a good 10



**Right:** Testing during the upgrade: Grenzebach experts checking a burner for proper function.



**Above:** Moist plasterboards on their way to the dryer.

years ago. In 2007/2008, the Grenzebach specialists had installed a plaster plant with a hammer mill calcining system, board line and mixing plant and had provided assistance during commissioning. The companies kept in close contact over the years, so the upgrade could be planned and completed quickly and smoothly.

#### Customised dryer for best results

The modular design of the cross-flow jet dryer not only made it easy to add more sections, the cross-flow configuration allows multiple airflow zones

with short flow paths allowing airflow and temperature characteristics that can be optimised for the best drying schedule for each individual product type. The drying air flows vertically onto the boards from above and below through hole-type nozzles in the jet box. This arrangement protects the cut board edge from being burned in the dryer. The equipment design and settings are such that an optimum board quality is obtained in the shortest possible drying time.

#### Higher output and longer service

"What matters to us when we do upgrades is not just to provide our customers with a higher output but also to increase the productivity and service life of the equipment and systems," emphasises Christian Gärtner. The Grenzebach experts are available to the gypsum industry to give advice and also carry out the upgrade, including process optimisation, plant overhaul, and modification of the hardware and software.

#### Complete package for the gypsum sector

The Grenzebach technology covers the entire production process in the gypsum industry; whether gypsum board, gypsum block, stucco or gypsum plaster production. The portfolio ranges from the installation of individual pieces of equipment up to the planning and construction of turn-key plants.

**Right:** Upgrading made easy: The cross-flow jet dryer has a modular design, allowing further sections to be added - and thus the capacity to be increased - easily.

